



89 Crawford Street
Leominster, Massachusetts 01453
Tel: 774.450.7177
www.lrt-llc.net

January 11, 2023

Ms. Catherine Coniaris
Massachusetts Department of Environmental Protection
100 Cambridge Street
Boston, MA 02108

Reference: Authorization Request to Discharge to an Outstanding Resource Water
Temporary Construction Dewatering for Site Redevelopment
93 Bennington Street
Revere, Massachusetts 02151

Dear Catherine:

On behalf of Sora Revere, LLC, Lockwood Remediation Technologies, LLC (LRT) is submitting this Authorization Request to Discharge to an Outstanding Resource Water. This request is being submitted as part of a Notice of Intent (NOI) submittal that is being prepared to request coverage under the newly promulgated National Pollutant Discharge Elimination System (NPDES) Dewatering and Remediation General Permit (DRGP) MAG910000 for site redevelopment activities to be performed at the 93 Bennington Street property in Revere, Massachusetts (the Site).

As part of the NOI preparation, LRT evaluated the proposed discharge route and determined that the discharge location (catch basin along Bennington Street) ultimately discharges to the Belle Isle Inlet. Information for the receiving water was collected from the Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 Reporting Cycle. Based on a review of this information, LRT identified that the Belle Isle Inlet is part of the Belle Isle Marsh and is identified as an Area of Critical Environmental Concern (ACEC). Additionally, the Belle Isle Inlet and its tributaries are classified as an "SA" surface water body and are considered an "Outstanding Resource Water" or ORW under the Massachusetts Surface Water Quality Standards (314 CMR 4.00). The Belle Isle Inlet is designated for shellfishing and is listed as impaired for fecal coliform, polychlorinated biphenyls (PCBs) in fish tissue and other contaminants in fish and/or shellfish.

As outlined in Section 1.3 of the DRGP, discharges to an ORW in Massachusetts are ineligible for coverage under the DRGP, unless an authorization is granted by the Massachusetts Department of Environmental Protection (MassDEP) by 314 CMR 4.04(3)(b). On this basis, LRT contacted the MassDEP via email on December 20, 2022 to inquire about an authorization to discharge to the Belle Isle Inlet under the DRGP. At the request of the MassDEP, LRT has prepared the following information pursuant to 314 CMR 4.04(5)(a) to facilitate an antidegradation review and determination by MassDEP to issue an authorization to discharge to the Belle Isle Inlet.

1. Describe how the discharge is for the express purpose and intent of maintaining or enhancing the resource for its designated use.

The proposed dewatering activities will enable the site to be redeveloped in accordance with the development plan for the 93 Bennington Street property in Revere, MA. The conditions within the Belle Isle Inlet will remain consistent with the existing conditions of the Belle Isle Inlet throughout the discharge, as the dewatered groundwater will be treated prior to discharge to meet the applicable NPDES DRGP Effluent Limitations. On this basis, it is LRT's opinion that the proposed discharge will maintain the resource for its designated use.

2. Are there less environmentally damaging alternative sites for the discharge, sources for disposal, or methods to eliminate the discharge that are reasonably available or feasible? Examples of what this demonstration may include are: an analysis of the reuse and conservation of discharge water, land application of discharge water or use of closed systems, improved process controls, improved discharge water treatment facility operation, discharge to sewer for treatment at wastewater treatment plant, alternative methods of treatment and treatment beyond applicable technology requirements of the Federal Clean Water Act. Technologically feasible alternatives must be compared with the potential environmental degradation.

Based on the site redevelopment plans and shallow groundwater at the site, dewatering must be conducted to enable the subsurface construction and installation of the foundation/underground parking and utilities associated with the proposed building. A feasibility evaluation has been performed and LRT has concluded the following:

- Discharge into a sewer system for treatment at a wastewater treatment plant is not available;
- On-site recharge is not reasonably feasible, due to the space constraints at the site (the proposed building will occupy the majority of the parcel) and the nature of the subsurface materials at the site; and
- Off-site transport of dewatered groundwater is not reasonably feasible, due to the excessive transportation and disposal costs.

On this basis, the proposed discharge has been determined to be the most practical approach for management of the water from the dewatering operations to be conducted at the site during the site redevelopment activities.

3. To the maximum extent feasible, are the discharge and activity designed and conducted to minimize adverse impacts on water quality, including implementation of source reduction practices? All reasonable efforts to minimize the environmental impacts of the proposed discharge must be made.

To minimize potential adverse impacts to the water quality of the Belle Isle Inlet, dewatered groundwater will be treated on-site prior to discharge to the storm sewer system. The treatment

system will be modified (as necessary) based on the results of the regular monitoring and compliance sampling to ensure compliance with the NPDES DRGP Effluent Limitations.

4. Will the discharge impair existing uses of the receiving water or result in a level of water quality less than that specified for the Class?

The proposed discharge will be treated to avoid any adverse impacts to the water quality of the Belle Isle Inlet.

Please feel free to contact us at 774-450-7177 if you have any questions or if you require additional information.

Sincerely,
Lockwood Remediation Technologies, LLC

Brian Caccavale

Brian Caccavale
Project Manager

Paul Lockwood

Paul Lockwood
President



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Leominster, Massachusetts 01453
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January 11, 2023

U.S. Environmental Protection Agency
Office of Ecosystem Protection
EPA/OEP RGP Applications Coordinator
5 Post Office Square, Suite 100 (OEP06-4)
Boston, Massachusetts 02109-3912

Reference: **Notice of Intent (NOI) – Dewatering and Remediation General Permit (DRGP)**
 Temporary Construction Dewatering for Site Redevelopment
 93 Bennington Street
 Revere, Massachusetts 02151

Dear Sir/Madam:

On behalf of Sora Revere, LLC, Lockwood Remediation Technologies, LLC (LRT) is submitting this Notice of Intent (NOI) to the U.S. Environmental Protection Agency (U.S. EPA) for coverage under the National Pollutant Discharge Elimination System (NPDES) Dewatering and Remediation General Permit (DRGP) MAG910000 for site redevelopment activities to be performed at the 93 Bennington Street property in Revere, Massachusetts (the Site).

This letter and supporting documentation were prepared in accordance with the U.S. EPA guidance for construction dewatering under the newly promulgated DRGP program. Rubicon Builders are the Construction Manager for the project and will have responsibility of the subcontractors performing the dewatering activities at the Site. Subcontractors working for Rubicon on the project will be required to meet the requirements of this NOI and the DRGP. The completed NOI Form is provided in **Appendix A**, Notice of Intent Form.

Site Information

The Site is located at 93 Bennington Street on the west side of Bennington Street in Revere, Massachusetts. The site encompasses several parcels of land for a combined footprint of approximately 30,000 square feet (SF) and is currently vacant. The Site is bounded by commercial properties to the north and south, Bennington Street to the east and the Massachusetts Bay Transportation Authority (MBTA) Blue Line tracks and right-of-way (ROW) to the west.

Two buildings were formerly located at the Site. At the northern parcel, identified as 83 Bennington Street, a one-story building was occupied by John Smith's Automotive & Sales used car lot. According to available records, the auto repair facility had multiple underground storage tanks (USTs) which have been removed and/or abandoned. Recently, the northern parcel was used to store stockpiles of soil and other miscellaneous construction materials.

A one-story building was formerly located on the remaining portion of the Site. The building was positioned over the east-west property boundary; approximately centered within the two parcels of land. In some areas of the Site, asphalt pavement is still visible at the ground surface.

This NOI has been prepared for the management of groundwater that will be generated during dewatering activities associated with excavation activities. A Site Locus depicting the location of the Site and the discharge location into the Belle Isle Inlet via a storm drain outfall is provided as **Figure 1**, Locus Plan. A Site Plan satisfying the requirements of the DRGP is provided as **Figure 2**, Site Layout Plan.

Work Summary

The project consists of the construction of one (1) 7-story residential building equipped with 114 housing units. The proposed building will include commercial space and parking at the ground level. A two-level “car stacker” will be incorporated into the building design and will be configured with one level of parking spaces above ground and one level of parking spaces below ground.

The earthwork activities associated with the Site redevelopment will require excavation of soil to depths ranging from approximately 9 to 10 feet below ground surface (bgs) to install foundations and utilities and to depths ranging from approximately 12 to 15 feet bgs to install the “car stacker” structure. Groundwater is anticipated to be encountered at a depth of approximately 5 to 9 feet bgs. To complete the proposed excavation activities **in the dry**, dewatering will be required to lower the groundwater table as the work is being performed. To do this, filtered sumps will be placed in low spots within the excavation. Groundwater that flows into the excavations during construction activities that requires dewatering and cannot be discharged back into the ground will be treated prior to discharge to an existing storm drain in the vicinity of the Site (along Bennington Street). Groundwater will be treated so that the discharged effluent meets the effluent limitations established by the DRGP Application. **Figure 3**, Water Treatment System Schematic, includes a schematic of the proposed water treatment system. The completed NOI form included as **Appendix A**. Drawings depicting the locations of the potential storm water discharge catch basins are provided in **Appendix B**, Proposed Stormwater Discharge Locations.

Discharge and Receiving Surface Water Information

On December 2, 2022, LRT personnel collected samples to characterize the receiving and Source Water in support of this NOI. The Source Water sample was collected from a test pit advanced on the 93 Bennington Street property, which is representative of site groundwater conditions. The receiving water sample was collected from the Belle Isle Inlet adjacent to the proposed outfall discharge location. The groundwater samples were submitted to ESS Laboratories of Cranston, Rhode Island for analysis of various parameters in accordance with the provisions of the DRGP.

The receiving surface water discharge point for the treatment system will be the Belle Isle Inlet (MA71-14). Information regarding the receiving water was collected from the Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 Reporting Cycle which is included in **Appendix C**, Selected Massachusetts Category 5 Waters. Dilution calculation information, including correspondence with the Massachusetts Department of Environmental Protection (MassDEP), is included in **Appendix D**, Dilution

Calculations. Analytical results for the source water and receiving water samples are summarized in **Table 1**, Summary of Water Quality Data, and analytical laboratory data reports are included in **Appendix E**, Laboratory Analytical Data Reports. Email correspondence documenting communication with the City of Revere Engineering Department and the City of Revere/MassDOT Storm Sewer Map are included in **Appendix F**, City of Revere/MassDOT Correspondence and Storm Sewer Map. Please note that written authorization from MassDOT has been obtained to facilitate discharge to the storm sewer system. A copy of this correspondence is also included in **Appendix F**.

Based on the analytical results, source water will undergo treatment that includes bag filtration and carbon treatment prior to discharge to meet the NPDES DRGP Effluent Limitations. LRT assumes that metals concentrations will be addressed by settling and bag filtration. Chemical aided settling, pH adjustment, bone char carbon treatment and ion exchange treatment have been included as contingency treatment options. These contingency treatment options will be implemented (as necessary), should further treatment beyond the base water treatment system be required in order to comply with the NPDES DRGP Effluent Limitations. Details of the water treatment system are provided below.

Consultation with Federal Services

LRT reviewed online electronic data viewers and databases from the Massachusetts Geographical Information System (MassGIS), the Massachusetts Division of Fisheries and Wildlife (MassWildlife; Natural Heritage and Endangered Species Program) and information obtained from the Information for Planning and Conservation (IPaC), available through the U.S. Fish and Wildlife Service (FWS) website. Based on this review, the excavation and proposed discharge activities will not impact Habitats of Rare Wetland Wildlife. Documentation of “no affect” has been included in **Appendix G**, Federal Correspondence.

A review of the National Register of Historic Places within Suffolk County was performed. Based on the review, the discharge and discharge-related activities do not have the potential to cause effects on historic properties. A list of the properties reviewed is included in **Appendix H**, National Register of Historic Places, Suffolk County, Massachusetts.

LRT reviewed online electronic data viewers and databases from the Massachusetts Executive Office of Energy and Environmental Affairs (EAA) to identify Environmental Justice populations in the vicinity of the Site. The Environmental Justice Populations Map is included in **Appendix I**, Environmental Justice Mapping. Specific instructions on how to interpret the data provided by the Environmental Justice Screening and Mapping Tool have not yet been uploaded by the EPA. Once available, this section may require additional review.

Based on this information, the Site and the proposed discharge point are not located within Habitats of Rare Wetland Wildlife, Habitats of Rare Species, Estimated Habitats of Rare Wildlife, or listed as a National Historic Place.

Water Treatment System

A water treatment system schematic is provided as **Figure 3**. Cutsheets of the system components, product information and Safety Data Sheets (SDS) are included in **Appendix J**.

Source water will be pumped to a treatment system with a designed flow of up to 150 gallons per minute (gpm); the average effluent flow of the system is estimated to be 75 gpm, and the maximum flow will not exceed 150 gpm. Source water will enter one 18,000-gallon weir tank at the head of the system. Water from the weir tank will be pumped to a triple bag filter skid consisting of three single bag filter vessels plumbed in parallel such that two filters can operate while the third remains on standby. From the bag filter skid, water will be pumped to two (2) high pressure, steel media vessels plumbed in series. Each vessel will contain 3,000 pounds of reactivated liquid phase carbon. As detailed above, treated water will be discharged to an existing storm drain in the vicinity of the Site (along Bennington Street), which ultimately discharges to an outfall to the Belle Isle Inlet, as depicted on **Figure 1**. Effluent sampling will correspond with this discharge location.

As detailed above, contingency treatment system options may include pH adjustment, chemical aided settling, bone char carbon treatment and/or ion exchange media treatment. Discharge from the treatment system will pass through a flow meter/totalizer meter prior to discharge into the Belle Isle Inlet.

Chemical and Additive Information

Based on groundwater samples collected from the site and in efforts to meet the expected effluent limitations, the following chemicals and additives have been proposed as contingency items for the treatment system: chemical aided settling system through coagulants/flocculants and pH adjustment via sulfuric acid and/or sodium hydroxide. Product names, chemical formulas, manufacturer information and Chemical Abstract Services (CAS) registry numbers have been provided on Safety Data Sheets (SDSs) included in **Appendix J**.

The addition of pH conditioners and chemical aided settling system chemicals will 1) Not add any pollutant in concentrations which exceed permit effluent limitations; 2) Not result in the exceedance of any applicable water quality standard; and 3) Not add any pollutants that would justify the application of permit conditions that differ from or are absent in this permit. The addition of sulfuric acid or sodium hydroxide to control pH is a standard treatment for temporary construction dewatering and is not expected to exceed applicable permit limitations and water quality standards or alter conditions in the receiving water. No additional testing is considered necessary for use of this product or to demonstrate that use of this product will not adversely affect the receiving water.

MassDEP Antidegradation Review/Authorization to Discharge to an Outstanding Resource Water

The Belle Isle Inlet and its tributaries are classified as an “SA” surface water body and an “Outstanding Resource Water (ORW)” under the Massachusetts Surface Water Quality Standards (314 CMR 4.00). Belle Isle Inlet is part of the Belle Isle Marsh and is also considered an Area of Critical Environmental

Concern (ACEC). As outlined in Appendix C, the Belle Isle Inlet is designated for shellfishing and is impaired for fecal coliform, PCBs in fish tissue and other contaminants in fish and/or shellfish.

As outlined in Section 1.3 of the DRGP, discharges to an ORW in Massachusetts are ineligible for coverage under the DRGP, unless an authorization is granted by the Massachusetts Department of Environmental Protection (MassDEP) by 314 CMR 4.04(3)(b). On this basis, LRT contact the MassDEP via email on December 20, 2022 to inquire about an authorization to discharge to the Belle Isle Inlet under the DRGP. At the request of the MassDEP, LRT has prepared additional information pursuant to 314 CMR 4.04(5)(a) to facilitate an antidegradation review and determination by MassDEP to issue an authorization to discharge to the Belle Isle Inlet. The additional information is included in **Appendix K**, MassDEP Antidegradation Review and Determination.

Coverage under NPDES RGP

On behalf of Sora Revere, LLC, we are requesting coverage under the NPDES DRGP for the discharge of treated groundwater to the Belle Isle Inlet in support of construction dewatering activities that are to take place at the Site.

The enclosed NOI form and supporting documentation provides the required information on the general site conditions, discharge, treatment system, receiving water, and consultation with federal services. For this project, Lockwood Remediation Technologies, LLC is considered the Operator and has operational control over the water treatment system and discharge activities, including the ability to make modifications to the water treatment system in accordance with the NPDES DRGP.

Refer to **Appendix L** for additional supporting documentation, including the required Electronic Signature Agreement and Paper NOI Certification Form.

Please feel free to contact us at 774-450-7177 if you have any questions or if you require additional information.

Sincerely,
Lockwood Remediation Technologies, LLC

Brian Caccavale

Brian Caccavale
Project Manager

Paul Lockwood

Paul Lockwood
President

Encl: Table 1 – Summary of Water Quality Data
Figure 1 – Site Locus
Figure 2 – Site Layout Plan
Figure 3 – Water Treatment System Schematic
Appendix A – Notice of Intent Form
Appendix B – Proposed Stormwater Discharge Locations

Appendix C – Selected Massachusetts Category 5 Waters
Appendix D – Belle Isle Inlet Dilution Calculations
Appendix E – Laboratory Analytical Reports
Appendix F – City of Revere/MassDOT Correspondence and Storm Sewer Map
Appendix G – Federal Correspondence
Appendix H – National Register of Historic Places, Suffolk County, Massachusetts
Appendix I – Environmental Justice Population Map
Appendix J – Water Treatment System Cutsheets
Appendix K – MassDEP Antidegradation Review and Determination
Appendix L – Additional Information

cc: Cathy Coniaris – MassDEP (via email)
Shauna Little – EPA Region 1 (via email)
Jay Peyser – Rubicon Builders (via email)
Michael MacInnes – D&M Civil (via email)
Paul Lockwood – LRT (via email)
Kim Gravelle – LRT (via email)

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Table

Lockwood Remediation
Technologies LLC



TABLE 1
NPDES DRGP Pre-Characterization Data Summary Table
 93 Bennington Street
 Revere, Massachusetts

Sample Date	12/2/2022	12/2/2022
Sample ID	Source Water	Receiving Water
Analysis		
A. General Chemistry		
pH	6.95	7.04
Hardness	419,000	921,000
Temperature (°C)	18.9	18.7
Turbidity (NTU)	995	18.0
B. Inorganics		
Chloride (mg/L)	880	NA
Total Residual Chlorine (mg/L)	<20	NA
Total Suspended Solids (TSS) (mg/L)	538	24
Total Dissolved Solids (TDS) (mg/L)	2,080	270
Total Nitrogen (mg/L)	13.2	NA
Total Phosphate (mg/L)	0.12	NA
Antimony	<5.0	<5.0
Arsenic	<5.0	<5.0
Cadmium	<1.0	<1.0
Chromium III	3.3	<2.0
Copper	56.3	4.7
Iron	1,270	1,420
Lead	115	<2.0
Mercury	0.5	<0.2
Nickel	13.8	<5.0
Selenium	<5.0	<5.0
Silver	<1.0	<1.0
Zinc	208	38.9
Cyanide (mg/L)	<5	NA
C. Fuel Parameters		
Total Petroleum Hydrocarbons (mg/L)	1,440	NA
Oil & Grease (mg/L)	<4.9	<4.9

Notes:

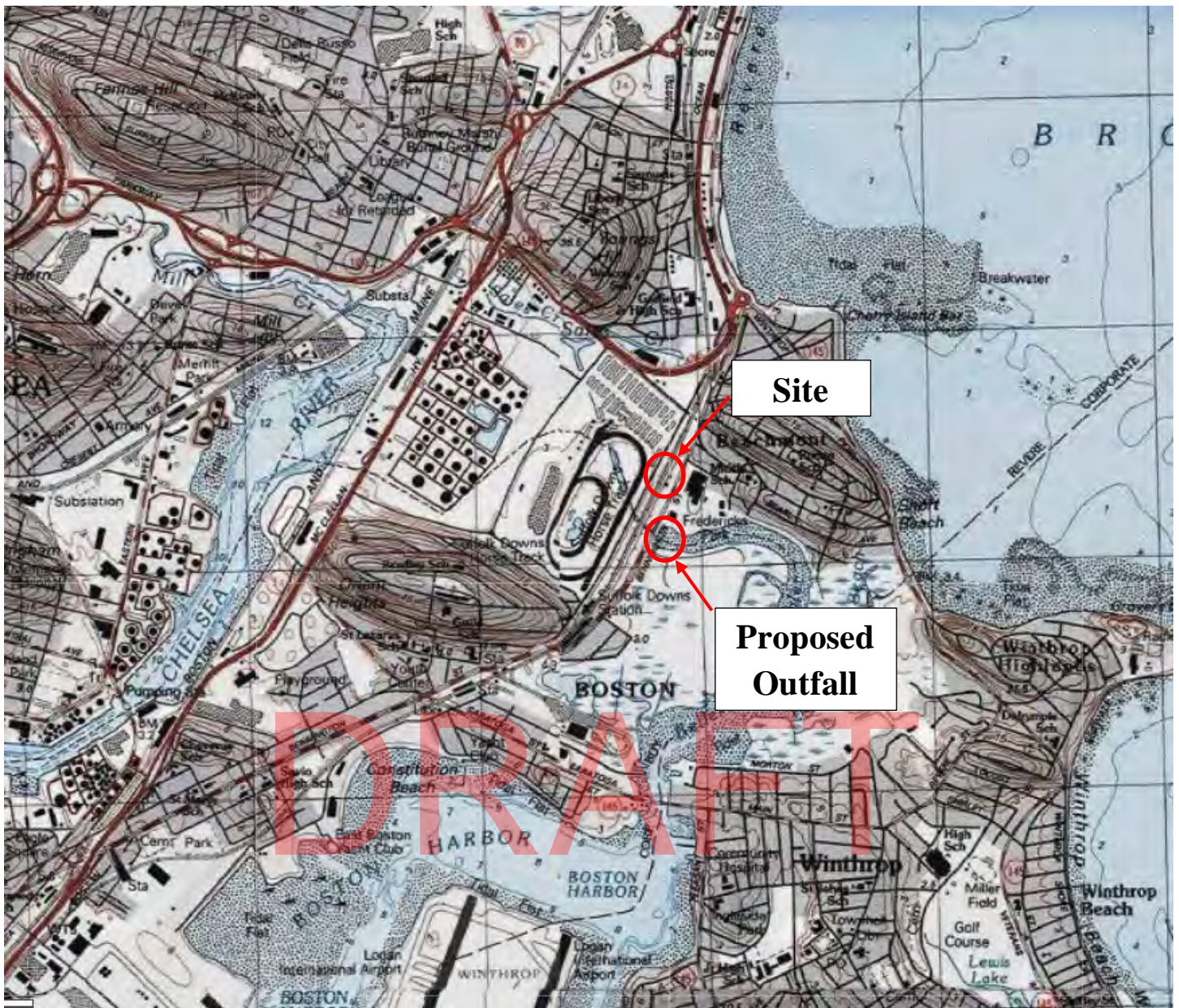
- 1) Reported in ug/L unless otherwise specified
- 2) ug/L = micrograms per liter
- 3) mg/L - milligrams per liter
- 4) NTU - nephelometric turbidity units
- 5) °C - degrees celsius

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Figures

Lockwood Remediation
Technologies LLC





Source: ArcGIS Map Viewer

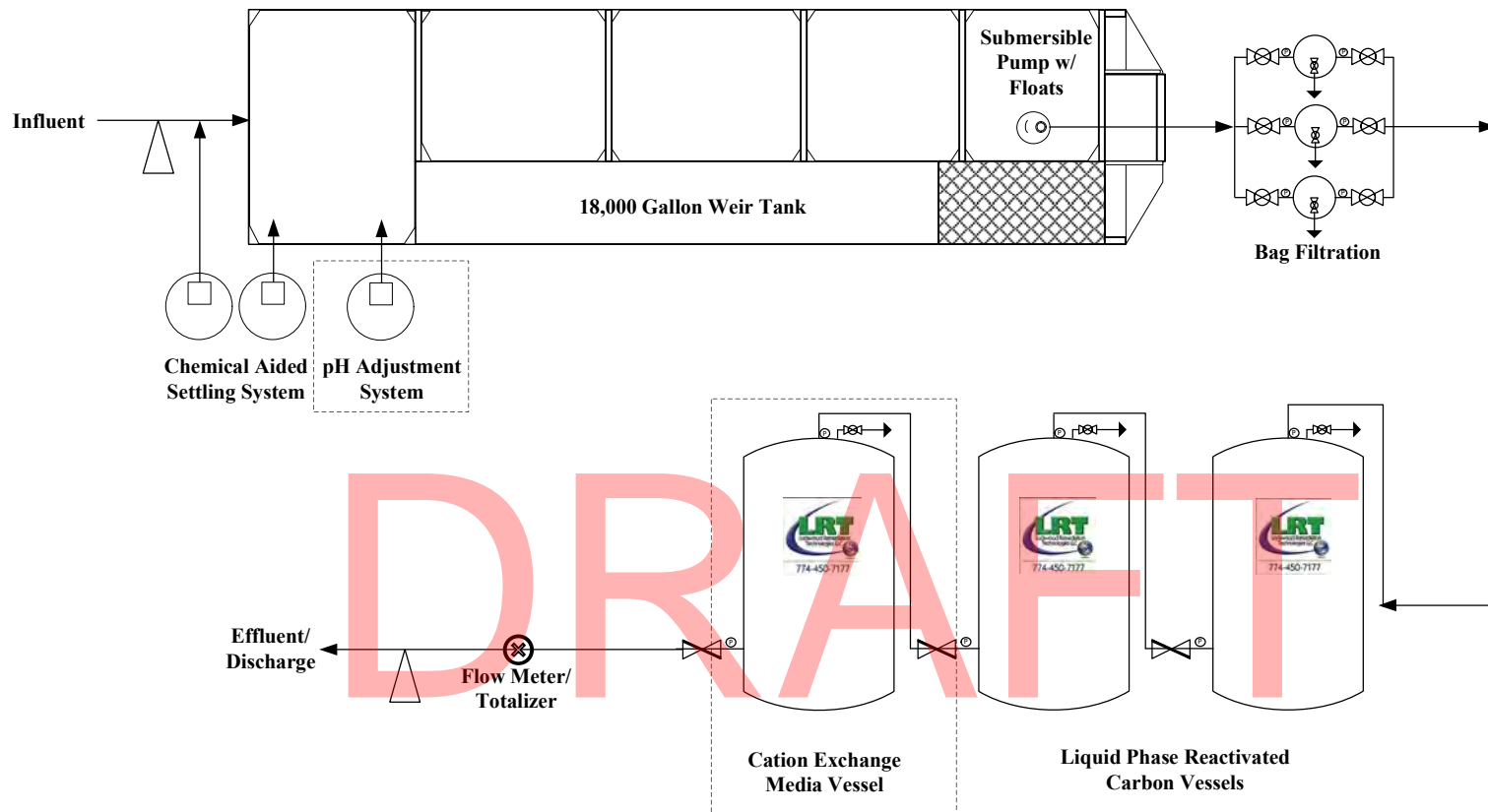
Notes

1. Figure is not to scale.



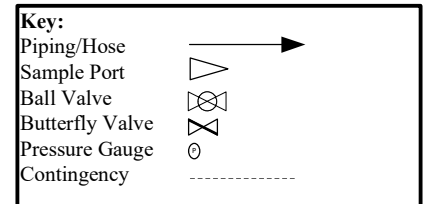
89 Crawford Street
Leominster, Massachusetts 01453
Tel: 774.450.7177
www.lrt-llc.net

Figure 1 – Locus Plan
93 Bennington Street
Revere, MA



Notes:

- 1) Figure is not to scale
- 2) System rated for 150 GPM



Lockwood Remediation Technologies, LLC
89 Crawford Street
Leominster, MA 01453
Office: 774-450-7177

DESIGNED BY: LRT

DRAWN BY: BAC

CHECKED BY:

DATE: 01/06/2023

Water Treatment System Schematic

93 Bennington Street
Revere, MA

PROJECT No.
2-2535

FIGURE No.
3

Appendix A
Notice of Intent Form

Lockwood Remediation
Technologies LLC



NeT Groundwater Remediation, Dewatering, and Hydrostatic Testing Eligibility Information

Eligibility Information

Select the state/territory where your site is discharging:

Massachusetts

Does your site discharge to federally recognized Indian Country lands?

No

If yes, select the Indian Country Lands:

N/A

Are you a Federal Operator?

No

Select all activities that this site is requesting coverage for:

☐ Site Remediation

☒ Site Dewatering

☐ Infrastructure Dewatering

☐ Material Dewatering

Select all source waters that this site is requesting coverage for:

☒ Groundwater

☐ Stormwater

☐ Potable Water

☐ Surface Water

Have discharges from your site been previously covered under a different NPDES permit?

No

If yes, enter the NPDES ID of this permit coverage:

N/A

Are you a new source as defined in 40 CFR 122.2?

No

Does your site discharge to Outstanding Resource Waters (ORWS) as defined in Massachusetts by 314 CMR 4.06, including Public Water Supplies 314 CMR 4.06(1)(d)1?

Yes

If yes, do you have authorization granted by the MassDEP, under 314 CMR 4.04(3)(b)?

A request for authorization to discharge to the Belle Isle Inlet has been submitted to the MassDEP. Refer to Appendix K.

Does your site discharge to Ocean Sanctuaries, as defined at 302 CMR 5.00?

No

Does your site discharge to territorial seas, as defined by Section 502 of the CWA?

No

Does your site discharge to a river designated as a Wild and Scenic River that is not in accordance with 16 U.S.C 1271 et seq? See part 1.4 for more information.

No

Are there remediation or dewatering discharges from your site resulting from on-site response action conducted pursuant to sections 104, 106, 120, 121, or 122 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)?

No

Does your site discharge to Publicly Owned Treatment Works (POTW) which are permitted under Section 402 of the CWA?

No

Does your site discharge dredge-related waters where the United States Army Corps of Engineers (ACE) authorizes the discharge of pollutants under a CWA 404 permit?

No

Operator Information

Operator Information (Permittee)

Operator Formal Name

Lockwood Remediation Technologies, LLC

Operator Organization's Mailing Address

Address Line 1:

89 Crawford Street

Address Line 2:

N/A

City:

Leominster

State:

Massachusetts

Zip/Postal Code:

01453

County:

Worcester

Operator Point of Contact Information

First Name:

Paul

Middle Initial:

N/A

Last Name:

Lockwood

Title:

President

Phone:

508-450-8802

Ext:

N/A

Email:

plockwood@lrt-llc.net

Is your site owned by a different entity?

Yes

Facility Owner Name

Sora Revere, LLC

Owner Contact Information

First Name:

William

Middle Initial:

N/A

Last Name:

Caci

Title:

Vice President

Phone:

617-510-0222

Extension:

N/A

Email:

bcaci@gansettventers.com

Owner Address Information

Address Line 1:

192 South Street

Address Line 2:

N/A

City:

Boston

State:

Massachusetts

Zip/Postal Code:

02111

County:

Suffolk

Does this site have additional operators (co-permittees) with active or pending requests for coverage under this general permit?

No

If yes, and if known, enter the NPDES ID of this permit coverage:

N/A

NOI Preparer Information

☒ This NOI is being prepared by someone other than the certifier

First Name:

Brian

Middle Initial:

Last Name:

Caccavale

Title:

Project Manager

Phone:

978-751-1265

Ext:

N/A

Email:

bcaccavale@lrt-llc.net

Site Information

Site Name:

93 Bennington Street

Site Address

Address Line 1:

93 Bennington Street

Address Line 2:

N/A

City:

Revere

State:

Massachusetts

Zip/Postal Code:

02151

County:

Suffolk

Latitude/Longitude for the Site

Latitude:

42° 23' 42.69" N

Longitude:

70° 59' 37.15" E

What is the ownership type of the site?

Privately Owned Facility

Is a State Remediation Program applicable to your site?

No

If yes, list all release tracking/license/permit numbers and activity use limitations:

N/A

Site Description

Provide a written description of operation including site history/origin, the purpose of the activities conducted at the site, how the operation will generate wastewater, the pollutants present (i.e. detected in environmental samples at any concentration), and the distribution of these pollutants across the site (i.e. type of media/phase, spatial distribution). Must include a description of any pollutants present in soil or sediment if that soil or sediment has not been removed from the site and will be disturbed during site activities.

The Site is located at 93 Bennington Street on the west side of Bennington Street in Revere, Massachusetts. The site encompasses three parcels of land for a combined footprint of approximately 30,000 square feet (SF) and is currently vacant.

The Massachusetts Bay Transportation Authority (MBTA) Blue Line tracks and right-of-way (ROW) immediately abut the three parcels along the west side of the Site. Two buildings were formerly located on the Site. At the northern parcel, identified as 83 Bennington Street, a one-story building was occupied by John Smith's Automotive & Sales used car lot. According to available records, the auto repair facility had multiple underground storage tanks (USTs) which have been removed and/or abandoned. Recently, the northern parcel was used to store stockpiles of soil and other miscellaneous construction materials.

A one-story building was formerly located on the remaining portion of the Site. The building was positioned over the east-west property boundary; approximately centered within the two parcels of land. In some areas of the Site, some asphalt pavement is still visible at the ground surface.

This NOI has been prepared for the management groundwater that will be generated during dewatering associated with excavation activities to be performed at the Site. A Site Locus depicting the location of the Site and the discharge location into the Belle Isle Inlet via a storm drain outfall is provided as **Figure 1**. A Site Plan satisfying the requirements of the DRGP is provided as **Figure 2**.

The earthwork activities associated with the Site redevelopment will require excavation of soil to depths ranging from approximately 9 to 10 feet below ground surface (bgs) to install foundations and utilities and to depths ranging from approximately 12 to 15 feet bgs to install the "car stacker" structure. Groundwater is anticipated to be encountered at a depth of approximately 5 to 9 feet bgs. To complete the proposed excavation activities in the dry, dewatering will be required to lower the groundwater table as the work is being performed. To do this, filtered sumps will be placed in low spots within the excavation. Groundwater that flows into the excavations during construction activities that requires dewatering and cannot be discharged back into the ground will be treated prior to discharge to an existing storm drain in the vicinity of the Site (along Bennington Street). Groundwater will be treated so that the discharged effluent meets the effluent limitations established by the DRGP Application. **Figure 3**, Water Treatment System Schematic, includes a schematic of the proposed water treatment system. The completed NOI for the Dewatering and Remediation General Permit is included as **Appendix A**. Drawings depicting the locations of the potential storm water discharge catch basins are provided in **Appendix B**.

Discharge Information

Discharge Point ID:

001

Discharge Point Description:

Outfall

Is the discharge an emergency discharge:

No

If yes, what is the start date of the emergency discharge?

N/A

If yes, what date did the permitting authority provide authorization for the emergency discharge?

N/A

Discharge Point Daily Maximum Flow (MGD):

0.216 MGD

What was the State determination for your receiving water critical low flow?

☒ No receiving water critical low flow authorized (i.e., no dilution factor)

☐ Receiving water critical low flow provided

What is your receiving water critical low flow? Must be greater than 0.

N/A

Please select all source waters applicable to this discharge point.

☒ Groundwater

☐ Stormwater

☐ Potable Water

☐ Surface Water

Did this discharge point reach the receiving water directly to an on-site system owned by the owner/operator?

No

If no, did the discharge point reach the receiving water indirectly to a municipal storm sewer system?

Yes

If yes, what is the name of the municipality?

City of Revere/MassDOT

Contact name:

Nicholas Rystrom (City of Revere – City Engineer)

Paul Stedman (MassDOT District Highway Director)

Email:

nrystrom@revere.org

paul.stedman@state.ma.us

If no, Did the discharge point reach the receiving water indirectly to a storm sewer system owned by a separate, private entity?

N/A

Describe how the discharge enters the receiving water, from the point of treatment to the receiving water. Make sure to identify any catch basins.

Effluent will enter an existing storm water drainage system via a catch basin(s) located Bennington Street adjacent to the Site. The storm water drainage system will ultimately discharge into the Belle Isle Inlet via a stormwater outfall.

Latitude/Longitude of the Site Discharge Point

Latitude:

42° 23' 41.7" N

Longitude:

70° 59' 37.31" W

Latitude/Longitude of the Receiving Water Discharge Point

Latitude:

42° 23' 35.6" N

Longitude:

70° 59' 39.55" W

Receiving Water

Waterbody Name:

Belle Isle Inlet (MA71-14)

Is the waterbody fresh water or salt water?

Salt water

Select the classification of this waterbody:

Class SA

What is the waterbody type?

Tributary

Tributary description:

Feeds into Boston Harbor Drainage Area

Is this receiving water a shellfishing area?

Yes

What was the recorded pH of the receiving water sample?

7.04

What was the recorded temperature of (°F) of the receiving water sample?

18.7 °C or 65.7 °F

What was the recorded hardness in mg/L (CaCO₃) of the receiving water sample?

921 mg/L

Have alternative pH effluent limits been approved?

N/A

If yes, what is the State approved alternate pH range (SU)?

N/A

Receiving Water Sample Results

Groundwater Sample Results

N/A

Stormwater Sample Results

N/A

Potable Water Sample Results

N/A

Surface Water Sample Results

Parameter	Present in Soil Only?	Value Qualifier	Maximum Influent Concentration	Test Method
Total Suspended Solids (mg/L)	<input type="checkbox"/> Yes	=	24	2540D
Turbidity (NTU)	<input type="checkbox"/> Yes	=	18.0	180.1
Total Dissolved Solids (mg/L)	<input type="checkbox"/> Yes	=	270	2540C
Oil and Grease (mg/L)	<input type="checkbox"/> Yes	<	4.9	1664A
Mercury Total Recoverable (µg/L)	<input type="checkbox"/> Yes	<	0.2	245.1
Copper Total Recoverable (µg/L)	<input type="checkbox"/> Yes	=	4.7	200.7
Iron Total Recoverable (µg/L)	<input type="checkbox"/> Yes	=	1,420	200.7
Zinc Total Recoverable (µg/L)	<input type="checkbox"/> Yes	=	38.9	200.7

Is the receiving water listed as impaired on the 303(d) list?

Yes

If yes, select the cause(s) of impairment.

Contaminants in shellfish, fecal coliform, PCB in fish tissue

Do you have any additional parameters listed in Appendix E or G in your discharge that are not listed in the sample table(s) above?

Yes. Source water and receiving water sample results presented in Table 1.

Select all parameters from Appendix E or G in your discharge that are not listed in the sample table(s) above.

Source water and receiving water sample results presented in Table 1.

Technology, Water Quality, and Impaired Water Limits (Appendix E and G)

Source water and receiving water sample results presented in Table 1.

Do you have any other additional parameters to disclose as required under part 2.1.3 case by case limitations?

Source water and receiving water sample results presented in Table 1.

Case by Case Limits

Source water and receiving water sample results presented in Table 1.

Concentration Limits

Source Water and Receiving water sample results presented in Table 1.

Quantity Limits

Source Water and Receiving water sample results presented in Table 1.

Treatment Information

Do you plan on applying treatment to your effluent prior to discharging?

Primary/chemical aided settling, bag filtration and carbon treatment. Contingency treatment system components may include pH adjustment bone char carbon treatment and/or ion exchange resin media treatment.

Indicate the type(s) of treatment that will be applies to your effluent prior to discharge: (select all that apply)

Treatment Type:

Separation/filtration and carbon treatment. Contingency treatment system components may include pH adjustment, chemical aided settling, bone char carbon treatment and/or ion exchange media treatment

Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.

Source water will be pumped to a treatment system with a designed flow of up to 150 gallons per minute (gpm). Source water will enter one 18,000-gallon weir tank at the head of the system. Water from the weir tank will be pumped to a triple bag filter skid consisting of three single bag filter vessels plumbed in parallel such that two filters can operate while the third remains on standby. From the bag filter skid, water will be pumped to two (2) high pressure, steel media vessels plumbed in series. Each vessel will contain 3,000 pounds of reactivated liquid phase carbon.

If required, contingency treatment may include pH adjustment, chemical aided settling, bone char carbon treatment and/or ion exchange media treatment. Discharge from the treatment system will pass through a flow meter/totalizer meter prior to discharge into the Belle Isle Inlet.

Identify each major treatment component: (select all that apply)

Treatments component:

Fractionation/weir tanks, bag filtration and carbon treatment. Contingency treatment may include pH adjustment, chemical aided settling, bone char carbon treatment and/or ion exchange media treatment.

Provide the design flow capacity in MGD of the most limiting component. Please note the permit authorizes a design flow up to 1.0 MGD.

0.216 MGD

Is the treatment plant a mobile unit?

Yes

Please select the discharge point that this treatment is being applied to:

001

Do you plan on applying chemical(s) or additive(s) to the discharge(s)?

The treatment system will include a chemical aided settling system via coagulant and flocculant. Contingency treatment may include pH adjustment via sulfuric acid and sodium hydroxide.

Name of Chemical:

LRT E-50 coagulant, LRT 9911 flocculant, sulfuric acid, sodium hydroxide

Estimated maximum concentration:

25 ppm

Select all parameters listed that are ingredients in this chemical:

See attached Safety Data Sheets (SDS)

Method of application:

Injection via chemical feed pumps

Please select the discharge point that this chemical is being applied to:

001

Schematic of Flow

Attach a schematic of flow including the following: the direction of water flow from the point of generation to the receiving water, the source water(s) with estimated volume noted, process water(s) with estimated volume noted, any treatment systems or processes with design flow noted, discharge point(s) with estimated volume noted, sampling points if different than discharge points, receiving water(s).

Refer to Figure 3

Safety Data Sheet (SDS)

Attach the Safety Data Sheet (SDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive.

Refer to Appendix J

Additional Information

Endangered Species Act

ESA eligibility for species under jurisdiction of USFWS

Indicate which criterion applies to the proposed discharge(s) under this general permit:

Criterion C: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and critical habitat have been evaluated. Based on those evaluation, a determination is made by EPA, or by the applicant and affirmed by the EPA, that the discharges and related activities will have “no effect” on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the FWS.

Has the documentation of the “no effect” finding been attached? Use the attachment section below.

Yes

ESA eligibility for species under jurisdiction of NOAA Fisheries

Is the discharge to: the Connecticut River between the Massachusetts/Connecticut state line and Turners Falls, MA; the Taunton River; the Merrimack River between Lawrence, MA and the Atlantic Ocean; the Piscataqua River including the Salmon Falls and Cocheco Rivers; or a marine water?

Yes

Indicate which criterion applies to the proposed discharge(s) under this general permit:

NMFS Criterion: A determination made by EPA is affirmed by the operator that the discharges and related activities will have “no effect” or are “not likely to adversely affect” any federally threatened or endangered listed species or critical habitat under the jurisdiction of NMFS and will not result in any take of listed species.

National Historic Preservation Act

Indicate which criterion applies to the proposed discharge(s) under this general permit:

Criterion A: No historic properties are present. The discharges and discharge-related activities (e.g. BMPs) do not have the potential to cause effects on historic properties.

Has the documentation been attached? Use the attachment section below.

Yes

Environmental Justice Executive Order(s)

Indicate which criterion applies to the proposed discharge(s) under his general permit:

EJ Criterion B: One or more environmental justice indices are in proximity to the discharges or related activities.

Has the documentation been attached? Use the attachment section below.

Yes

Has the State Antidegradation Review been attached? Use the attachment section below.

A request for authorization to discharge to the Belle Isle Inlet has been submitted to the MassDEP. Refer to **Appendix K**.

Has the Municipal Review been attached? Use the attachment section below to attach any discharge permit issued by a municipality or indicate if a permit will be issued upon approval from EPA; Attach any written determination by a Conservation Commission, i.e., Order of Conditions.

Yes

SWPP/BMPP

Indicate which criterion applies to the proposed discharge(s) under this permit:

New discharge: a BMPP meeting the requirements of this general permit will be developed and implemented upon initiation of discharge.

Has notification been provided to the appropriate state?

Yes

Has notification been provided to the municipality in which the discharge is located?

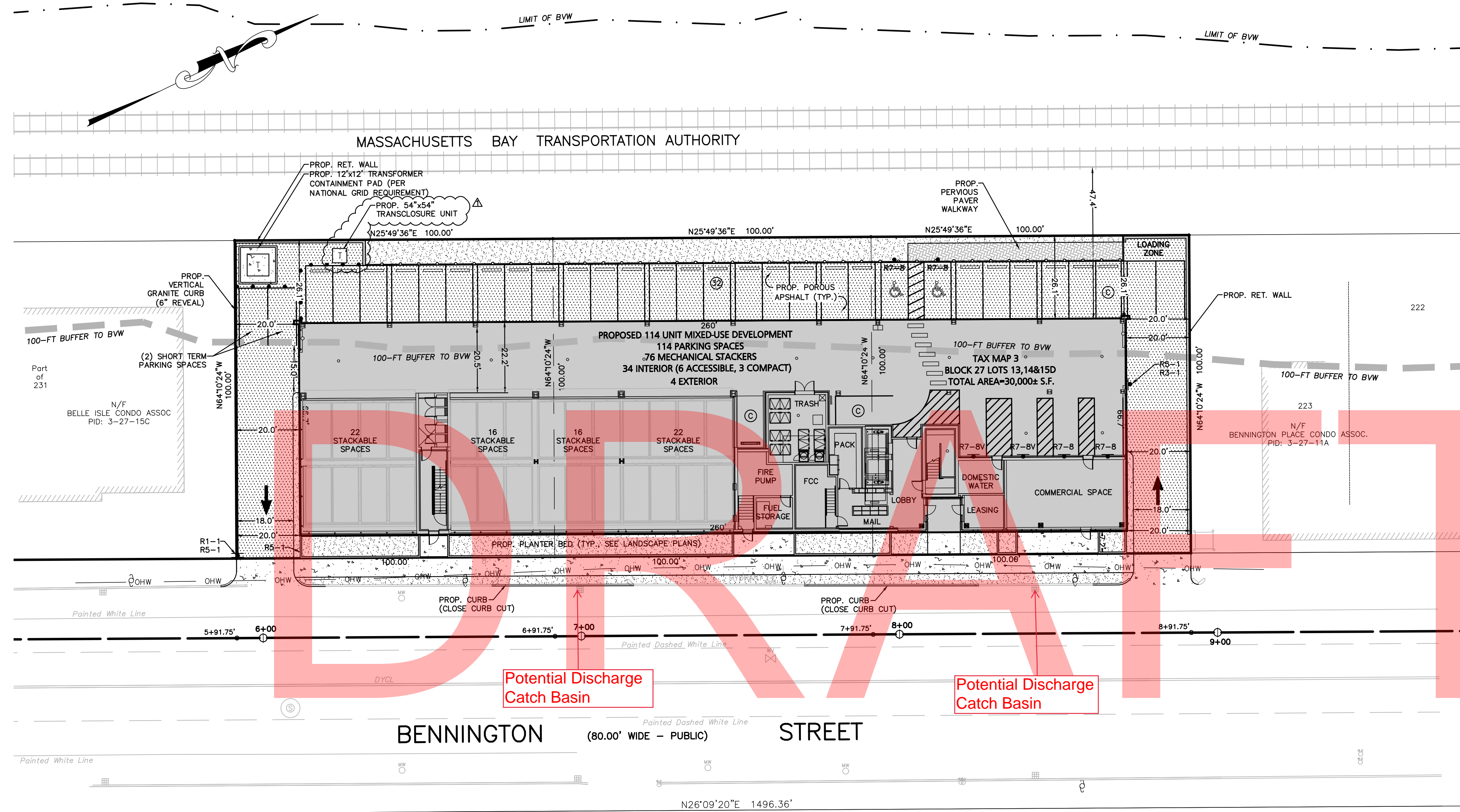
Yes

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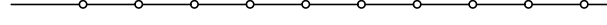





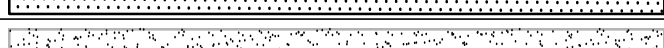
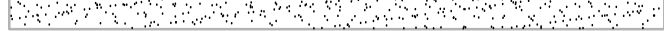
Appendix B
Proposed Stormwater Discharge Locations

Lockwood Remediation
Technologies LLC





LEGEND - SITE PLAN

EXISTING PROPERTY LINE	
EXISTING CURB	
PROPOSED FENCELINE	
PROPOSED PARKING STRIPE	
PROPOSED RETAINING WALL	
PROPOSED BUILDING	
PROPOSED CURB	
PROPOSED PARKING COUNTRY	
PROPOSED POROUS ASPHALT	
PROPOSED LANDSCAPED AREA	

GENERAL NOTES:

1. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INTERIOR BUILDING LAYOUT DETAILS.
2. REFER TO LANDSCAPE PLANS FOR LOCATION AND DESCRIPTION OF ALL PROPOSED PLANTINGS.






LAND USAGE TABLE			
00 DISTRICT			
ITEM	REQUIRED	PROVIDED	RELIEF REQUIRED
MINIMUM LOT SIZE	10,000 SF	30,000 SF	NO
MINIMUM LOT FRONTAGE	100 FT	300.0 FT	NO
MINIMUM FRONT YARD SETBACK	20 FT	7.2 FT	YES
MINIMUM SIDE YARD SETBACK	15 FT	20 FT	NO
MINIMUM REAR YARD SETBACK	20 FT	24.8 FT	NO
MAXIMUM HEIGHT	50 FT	85.5 FT	YES
MAXIMUM STORES	5	7	YES
MAXIMUM FENCE HEIGHT	10 FT	N/A	NO
FLOOR AREA RATIO (FAR)	1.5	3.64	YES

NOTES:
1. VARIANCE GRANTED IN A DECISION BY THE CITY OF REVERE ZONING BOARD OF APPEALS DATED SEPTEMBER 23, 2020 AND RECORDED AT THE SUFFOLK COUNTY REGISTRY OF DEEDS AS BOOK 64012 PAGE 134

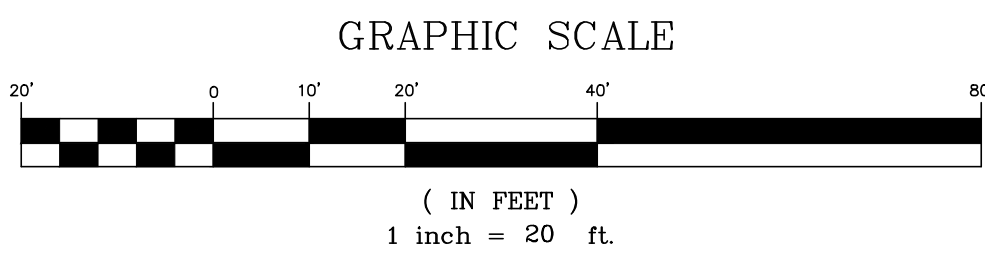
PARKING CALCULATION		
COMPONENT	REQUIRED	PROPOSED
TWO BEDROOM UNIT	1.75 Spaces per dwelling unit = 18 10 Two Bedroom Units x 1.75=17.5 Spaces	76 MECHANICAL STACKER 34 INTERIOR (3 COMPACT, 6 ACCESSIBLE, 25 STANDARD)
ONE BEDROOM UNIT	1.50 Spaces per dwelling unit = 156 104 One Bedroom Units x 1.5=156	4 EXTERIOR
TOTAL	174	114

NOTES:

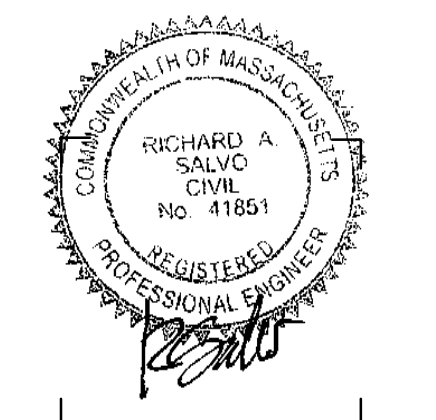
1. STANDARD "SPACE: 9' x 18'."
(PER SECTION 17.28.030 "SPACE DIMENSIONS" OF THE REVERSE ZONING BYLAW: "PARKING SPACES IN PARKING GARAGES OR OTHER BUILDINGS SHALL BE A MINIMUM OF 8.5' IN WIDTH BY SEVENTEEN FEET IN LENGTH AND HAVE AT LEAST SEVEN FEET OF VERTICAL CLEARANCE.")
2. ACCESSIBLE SPACE REQUIRED = 5 (101-150 SPACES 521CMR23.2.1)
3. IN THE GB DISTRICT THE OFF STREET PARKING REQUIREMENT SHALL BE 1.5 SPACES PER ONE BEDROOM UNIT.
1.75 SPACES PER TWO BEDROOM UNIT AND 2 SPACES PER UNIT FOR THREE OR MORE BEDROOMS.
4. RELIEF FROM REQUIRED OFF-STREET PARKING SPACES GRANTED IN VARIANCE DECISION

SIGN TABLE					
REGULATORY DESCRIPTION	SIGN	SIZE	MOUNTING HEIGHT GRADE TO TOP 8500 - 8.6m	DESCRIPTION	REFLECTORIZED
R7-8		12" X 20"	7' - 0"	GREEN & BLUE ON WHITE	YES
R7-8V		12" X 20"	7' - 0"	GREEN & BLUE ON WHITE	YES
R1-1		24" x 24"	7' - 0"	WHITE ON RED	YES
RS-1		24" x 24"	7' - 0"	WHITE ON RED	YES
R3-1		24" x 24"	7' - 0"	BLACK & RED ON WHITE	YES

ALL SIGNS AND PAVEMENT MARKINGS TO BE INSTALLED SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)



MARK	ISSUE	DATE
1	ADDENDUM 5	06/17/2022



ISSUE:	ISSUED FOR CONSTRUCTION
DATE:	04/04/2022
PROJECT #:	19084
SCALE:	1"=20'

DRAWING TITLE

Site Layout Plan

DRAWING NUMBER

C200

Appendix C
Selected Massachusetts Category 5 Waters

Lockwood Remediation
Technologies LLC



Final Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 Reporting Cycle



CN 505.1

Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
Kathleen A. Theoharides, Secretary
Massachusetts Department of Environmental Protection
Martin Suuberg, Commissioner
Bureau of Water Resources
Kathleen Baskin, Assistant Commissioner

NOTICE OF AVAILABILITY

This report is available at the Massachusetts Department of Environmental Protection's (MassDEP) website: <https://www.mass.gov/total-maximum-daily-loads-tmdls>.

DRAFT

Cover photo: Horn Pond, Woburn, MA by Dan Davis

Final Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 Reporting Cycle

Prepared by:

Massachusetts Division of Watershed Management
Watershed Planning Program

DRAFT

CN: 505.1

November 2021



MASSACHUSETTS
DEPARTMENT
OF
ENVIRONMENTAL
PROTECTION

Massachusetts Department of Environmental Protection
Division of Watershed Management
Watershed Planning Program
8 New Bond Street
Worcester, Massachusetts 01606

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10. Boston Harbor: Weymouth & Weir River Watershed and Coastal Drainage Area Assessment and Listing Decision Summary
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List of Acronyms and Abbreviations

AU	Assessment Unit
ATTAINS	Assessment and TMDL Tracking and Implementation System
BMPs	Best Management Practices
CALM	Consolidated Assessment and Listing Methodology
CSO	Combined Sewer Overflows
CWA	Clean Water Act
DFG	Massachusetts Department of Fish and Game
DMF	Massachusetts Division of Marine Fisheries
DPH	Massachusetts Department of Public Health
EPA	U.S. Environmental Protection Agency
IUP	Intended Use Plan
IR	Integrated Report
MassBays	Massachusetts Bays National Estuary Partnership
MassDEP	Massachusetts Department of Environmental Protection
MCCA	Massachusetts Coastal Condition Assessment
MEP	Massachusetts Estuaries Project
MS4	Municipal Separate Stormwater Sewer Systems
MWRA	Massachusetts Water Resources Authority
NHD	National Hydrography Dataset
NPDES	National Pollutant Discharge Elimination System
NPS	Nonpoint Source
QAPP	Quality Assurance Project/Program Plan
SARIS	Stream and River Inventory System
SMASST	University of Massachusetts at Dartmouth School of Marine Science and Technology
SRF	Massachusetts State Revolving Fund
SWQS	Surface Water Quality Standards
TMDL	Total Maximum Daily Load
USGS	U.S. Geological Survey
WPP	Watershed Planning Program



EXECUTIVE SUMMARY

The *Final Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 Reporting Cycle* (Integrated Report or IR) is submitted to the U.S. Environmental Protection Agency (EPA) in fulfillment of reporting requirements of sections 305(b), 303(d) and 314 of the Clean Water Act (CWA). Section 305(b) of the CWA codifies the process whereby waters are evaluated with respect to their attainment of designated uses such as habitat for fish, other aquatic life and wildlife, fish and shellfish consumption, and primary (e.g., swimming) and secondary (e.g., boating) contact-recreation. Under Section 314 states are requested to report on the trophic status of their lakes and ponds. Finally, Section 303(d) of the CWA requires states to identify those waterbodies that are not expected to meet surface water quality standards after the implementation of technology-based controls and to prioritize and schedule them for the derivation of total maximum daily loads (TMDLs).

Several enhancements were made to the *Massachusetts Consolidated Assessment and Listing Methodology (CALM) Guidance Manual* in anticipation of the 2018/2020 CWA assessment and reporting cycle. The 2018/2020 CALM Guidance Manual (MassDEP 2018a) provides new information pertaining to the evaluation of toxic pollutants, harmful algal blooms and both cold water and diadromous fish habitat. The new guidance also introduces the use of the Targeted Fish Community model, developed by the Massachusetts Department of Fish and Game (DFG), for the assessment of the aquatic life use in selected mainstem rivers. A new section of the guidance presents the process and rationale for defining assessment units (AUs) for reporting and listing the use-attainment status of Massachusetts' surface waters and a new appendix entitled "Standard Practices for Water Data Reduction and Analysis" has been included. Finally, the application of a new linear regression tool for estimating chloride concentrations from specific conductance measurements in freshwaters is described. The 2018/2020 CALM Guidance Manual can be found at <https://www.mass.gov/service-details/water-quality-assessments>.

The *Final Massachusetts Year 2016 Integrated List of Waters* was submitted to the EPA on December 5, 2019 and the 303(d) List was approved on January 2, 2020. The 2016 integrated reporting cycle included a statewide assessment (i.e., all watersheds) of the shellfish harvesting, primary and secondary contact recreation and aesthetic uses, as well as the assessments of the aquatic life use-attainment status of 15 watersheds and/or coastal drainage systems. Therefore, for the 2018/2020 reporting cycle, MassDEP focused its efforts on the assessment of the aquatic life use for the watersheds that were not completed for the 2016 IR.

The 2018/2020 IR assigns each of 2,694 assessment units (AUs) to one of the following five categories depending upon their status with respect to the support of their designated uses:

- 1) Unimpaired and not threatened for all designated uses;
- 2) Unimpaired for some uses and not assessed for others;
- 3) Insufficient information to make assessments for any uses;
- 4) Impaired or threatened for one or more uses, but not requiring the calculation of a Total Maximum Daily Load (TMDL); or
- 5) Impaired or threatened for one or more uses and requiring a TMDL.

The table below summarizes, by waterbody type, the number and total sizes of AUs appearing in each category of the 2018/2020 IR. When formulating the 2018/2020 IR, a total of 219 new waterbodies (AUs) were added to all list categories of the previous version of the IR (i.e., 2016) based on new assessments. Appendices 3 and 4 to this document summarize the impairment causes *added to* and *removed from* the IR, respectively, while Appendix 5 summarizes changes made to impairments since the 2016 cycle (e.g., action IDs added or pollutant status changed).



Integrated List Category	Rivers		Lakes		Coastal Waters		Total AUs
	AUs	Size (Miles)	AUs	Size (Acres)	AUs	Size (sq. mi.)	
1	0	0.00	0	0.00	0	0.00	0
2	502	1,492.70	36	1,576.00	19	21.54	557
3	140	306.41	505	29,584.55	17	0.72	662
4a	36	108.00	122	44,763.00	146	57.94	304
4b	0	0.00	0	0.00	0	0.00	0
4c	61	169.40	223	14,215.50	0	0.00	284
5	468	2,085.95	285	28,946.00	134	166.96	887
5a	0	0.00	0	0.00	0	0.00	0
Totals	1,207	4,162	1,171	119,085	316	247	2,694

A total of 816 impairments were added to new or existing AUs (see Appendix 3), 151 of which were simply refinements of existing impairments (e.g., clarification of listing cause). Of the new impairments added, 249 were pollutants requiring the development of TMDLs, while 43 were covered under new or previously developed TMDLs. The number of new impairments requiring TMDL development represents a worst-case scenario, however, because, in many cases, more than one 303(d) impairment cause can be addressed by a single TMDL. For example, a TMDL for phosphorus will address such additional impairments as chlorophyll, harmful algae blooms, nutrient eutrophication biological indicators, and dissolved oxygen supersaturation. The remaining 524 non-pollutant impairments will require the implementation of various types of pollution control plans.

In addition to the above changes, new assessments led to the removal of 100 impairments from the IR due to water quality standards attainment, change in assessment methodology, or having been originally listed in error, including removal of 3 historic impairments transferred from former AUs. Substitutions of new impairments for existing impairments accounted for 151 of the removals in Appendix 5.

Appendix 5 summarizes changes made to existing impairments. Most impairments were covered under new or existing TMDLs (54), while 22 impairments were covered under an Alternate Restoration Plan (including 3 historic impairments transferred from a former AU). Another 48 impairments experienced pollutant status changes (including 3 historic impairments transferred from a former AU).

The *Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 Reporting Cycle – Draft for Public Comment* was placed on the MassDEP web site at <https://www.mass.gov/total-maximum-daily-loads-tmdls> on April 28, 2021. Notice of its availability for public review and comment was provided by electronic mail to approximately 150 different watershed associations and other interested parties. The notice also appeared in Vol. 98, Issues 09 (May 10, 2021) and 10 (May 26, 2021) of the Massachusetts Environmental Monitor. The initial public comment period end date of May 28th was extended on May 12th to June 21, 2021. Twenty-five (25) comment letters were received by the end of the public review period, and responses to those comments are presented in *Final Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 Reporting Cycle – Responses to Public Comments* published under separate cover (MassDEP 2021). Adjustments were made to the 2018/2020 integrated list as described in the public comment document and as the result of discussions with the EPA during the final review and approval process. All changes made between the release of the proposed list (i.e., public review draft) and the final version are summarized in Appendix 25.



INTRODUCTION

The Federal Water Pollution Control Act of 1972 and subsequent Amendments in 1977, 1981, and 1987 are collectively known as the Clean Water Act (CWA). The objective of this statute is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. As one step toward meeting this goal each state must administer a program to monitor and assess the quality of its surface and groundwater and provide periodic status reports to the U.S. Environmental Protection Agency (EPA), the U.S. Congress, and the public. Section 305(b) of the CWA codifies the process whereby waters are evaluated with respect to their capacity to support designated uses as defined in each of the states' surface water quality standards (SWQS). These uses include aquatic life support, fish and shellfish consumption, drinking water supply, and primary (e.g., swimming) and secondary (e.g., boating) contact recreation. The 305(b) process entails the assessment of each of these uses for rivers, lakes, and coastal waters. Causes and sources of impairment are identified wherever possible. It is important to note that not all waters are assessed. Many small and/or unnamed rivers, lakes, and estuarine areas have never been assessed and, therefore, the status of their designated uses has never been reported.

Section 303(d) of the CWA and the regulations at 40 CFR 130.7 require states to identify those waterbodies that are not expected to meet SWQS after the implementation of technology-based controls, and to prioritize and schedule them for the development of total maximum daily loads (TMDLs). A TMDL establishes the maximum amount of a pollutant that may be introduced into a waterbody and still ensure the attainment and maintenance of SWQS. Furthermore, a TMDL must also allocate that acceptable pollutant load among all potential sources. The formulation of the 303(d) *List of Impaired Waters* (303(d) List) includes a public review and comment process, and the final version of the 303(d) List must be formally approved by the EPA.

EPA encourages states to combine the reporting requirements of sections 305(b), 303(d) and 314 of the CWA within a single "integrated report" (IR). The IR format allows states to report on the status of their assessed waters in a single, multi-part list. Assessment units (AUs) (i.e., lake, estuary, river or river segment) are assigned to one of the following five categories:

- 1) Unimpaired and not threatened for all designated uses;
- 2) Unimpaired for some uses and not assessed for others;
- 3) Insufficient information to make assessments for any uses;
- 4) Impaired or threatened for one or more uses, but not requiring the calculation of a TMDL; or
- 5) Impaired or threatened for one or more uses and by one or more pollutants that require restorative "Action" such as TMDLs or Alternative Restoration Plans (i.e., the 303(d) List).

Pollutant impairments in AUs listed in Category 5 constitute the 303(d) List and, as such, are reviewed and approved by the EPA. The remaining four categories and all non-pollutants (including those in Category 5 waters) are submitted in fulfillment of the requirements under section 305(b).

On May 3, 2018, the Massachusetts Department of Environmental Protection (MassDEP) released the *Massachusetts Consolidated Assessment and Listing Methodology (CALM) Guidance Manual for the 2018 Reporting Cycle* (CALM Guidance Manual) (MassDEP 2018a) which provides the methods and rationale for making the assessment decisions embodied in the 2018/2020 IR. The 2018 version of the CALM Guidance Manual contains several updates and enhancements, some of which are summarized below.

- A section has been added that presents the process and rationale for defining AUs for reporting and listing the use-attainment status of Massachusetts' surface waters.
- A new appendix provides clarifying information on how environmental data are reduced and analyzed by the MassDEP for the purposes of assessing and listing waters in accordance with the requirements of the CWA.
- New assessment guidance was developed to include the status of fish passage and the availability of diadromous fish habitat in coastal streams when evaluating the aquatic life use.



- A new linear regression tool for estimating chloride concentrations from specific conductance measurements in freshwaters is described. Because continuous specific conductance data are available from deployed probes, chloride concentrations can be predicted from those data and compared with EPA aquatic life criteria.
- The use of the Massachusetts DFG Targeted Fish Community model was initiated, where appropriate, for the assessment of the aquatic life use in selected mainstem rivers.

During the 2016 assessment and reporting cycle, MassDEP completed a statewide assessment (i.e., all watersheds) of the shellfish harvesting, primary and secondary contact recreation and aesthetic uses, as well as the assessments of the aquatic life use-attainment status of 15 watersheds and/or coastal drainage areas (MassDEP 2019). Therefore, for the 2018/2020 reporting cycle, MassDEP focused its efforts on the assessment of the aquatic life use for the watersheds that were not completed for the 2016 IR.

This report opens with some descriptive statistics pertaining to the surface water resources of Massachusetts, followed by a brief analysis of the costs and benefits of clean water, and an overview of MassDEP's water quality management program. Next, a general description of the process used to assess and categorize the use-attainment status of Massachusetts' waters is presented along with a summary of the data and information that informed the 2018/2020 assessments. The section entitled "Prioritizing Waters for TMDL or Alternative Restoration Plans" describes how MassDEP is applying the principles of EPA's *Long-term Vision Framework* for the Section 303(d) Program to schedule impaired waters for the development of TMDL or other measures for their restoration (EPA 2013). Following this introductory material, all of Massachusetts' assessed waterbodies (i.e., AUs) are presented by major watershed (see Figure 1) in individual tables corresponding to the IR categories defined above. The appendices present the list of actions approved by EPA to date, a complete list of AUs with their assigned integrated list categories, the impairments added/removed/changed between the 2016 and 2018/20 IRs, and individual watershed-based decision summary documents.

MASSACHUSETTS SURFACE WATER ATLAS

The Commonwealth of Massachusetts ranks 44th out of the 50 states in surface area (approx. 10,555 sq mi of dry land and inland water combined), yet its estimated (2019) 6,892,503 inhabitants place it 15th in population (US Census Bureau 2019). More than 75 percent of the population resides in the eastern one-third of the state.

Massachusetts encompasses two geological provinces: The Coastal Plain and the New England Upland. Cape Cod and the Islands form the Coastal Plain and consist of low hills and plains covering unconsolidated sediments that form the most productive aquifers in the state. The New England Upland province consists of till and stratified drift above metamorphic and igneous rocks and provides small productive aquifers. Groundwater is used for water supply in small communities and almost exclusively on Cape Cod and the Islands. Surface water is the major source of water supply for all the major urban areas in the state since no other source can meet these demands. Surface water in the state is relatively plentiful and of high quality, but it is not distributed in proportion to the distribution of the population. Two thirds of Massachusetts' residents depend upon surface water for their needs. The Massachusetts Water Resources Authority (MWRA) supplies communities in the greater Boston area (about half the state usage of surface water) from Quabbin and Wachusett reservoirs in the central uplands.

Annual precipitation averages about 44 inches and is evenly distributed throughout the state. Average annual evaporation of free water surfaces ranges from about 26 inches in Western Massachusetts to about 28 inches in the eastern half of the state. Yearly runoff ranges from about 20 inches in Cape Cod to about 32 inches in the northwestern corner of the state. The lowest runoff generally occurs during July, August and September. Runoff is highest in March in the eastern sections of the state and April in the western sections and at higher elevations.



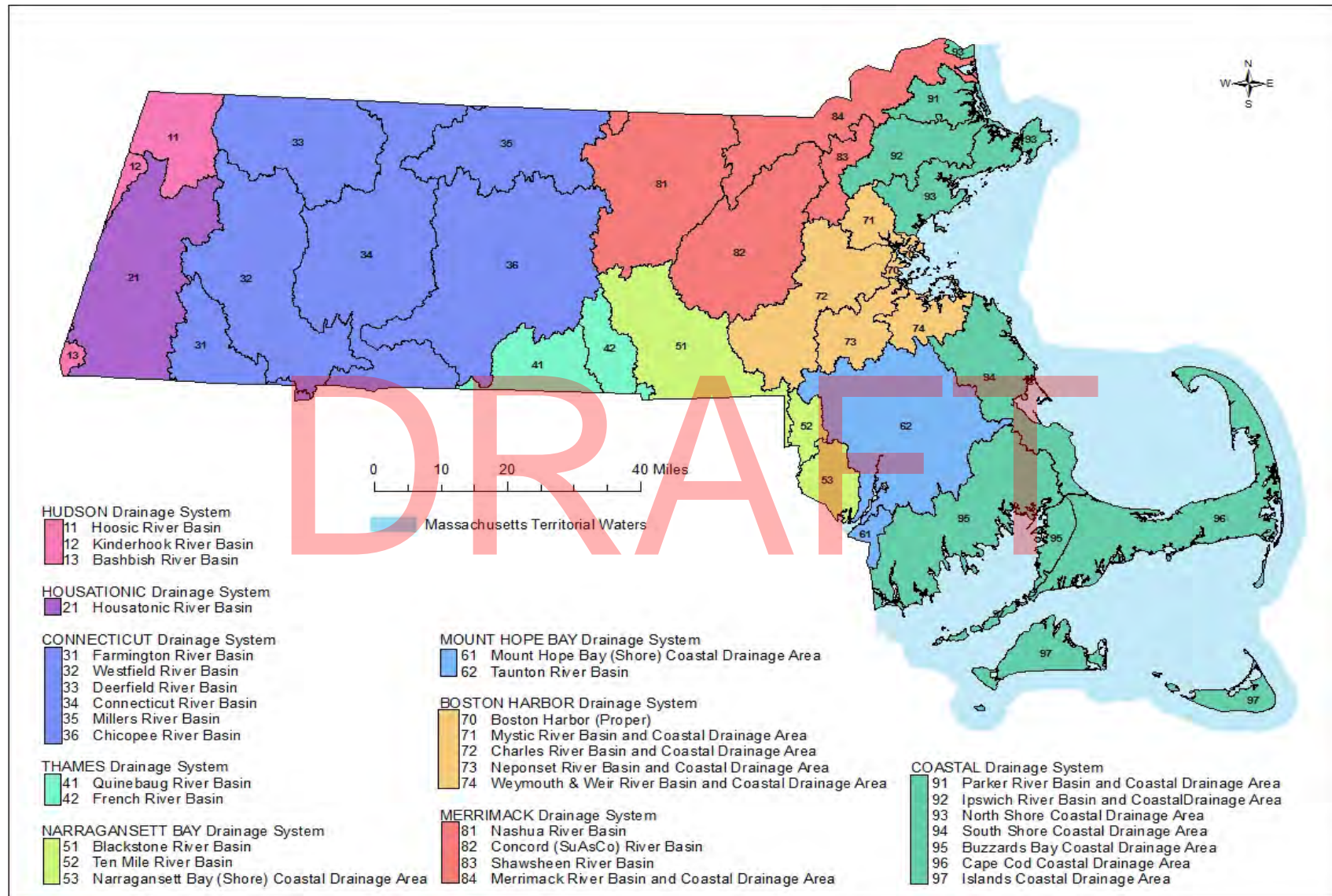
A summary of general surface water resource statistics for Massachusetts is provided in Table 1. Massachusetts incorporates all or a portion of nine major drainage systems – Hudson, Housatonic, Connecticut, Thames, Narragansett Bay, Mount Hope Bay, Boston Harbor, Merrimack and Coastal – that, in turn, comprise 33 smaller river basins (i.e., watersheds) and/or coastal drainage areas that generally serve as the fundamental planning units of Massachusetts' surface water monitoring, assessment and management programs (see Figure 1).

Table 1. Surface Water Atlas for Massachusetts.

Water Type [Scale] (units)	Value	Data Source*
Rivers [1:24,000]		
Perennial river/streams (miles)	10,033	UMass NHD Hydrography Project ¹
Intermittent streams (miles)	3,684	UMass NHD Hydrography Project ¹
Ditches and Canals (miles)	202	UMass NHD Hydrography Project ¹
Lakes [1:25,000]		
Number of Lakes and Ponds >= 5 acres	2,622	MassGIS - MassDEP Hydrography ²
Area of Lakes and Ponds >= 5 acres (acres)	153,514	MassGIS - MassDEP Hydrography ²
Number of Lakes and Ponds < 5 acres	24,479	MassGIS - MassDEP Hydrography ²
Area of Lakes and Ponds < 5 acres (acres)	15,506	MassGIS - MassDEP Hydrography ²
Coastal Waters [1:25,000]		
Coastal Waters (square miles)	2,726	MassGIS – MassDFG Designated Shellfish Growing Areas ³
Total Tidal Shoreline (miles)	1,519	U.S. Coast and Geodetic Survey ⁴
Wetlands [1:5,000]		
Marine and Estuarine Wetlands (acres)	107,525	MassDEP Wetlands Program ^{5,6}
Freshwater Vegetated Wetlands (acres)	467,331	MassDEP Wetlands Program ^{5,7}
Total Area of Wetlands (acres)	574,856	MassDEP Wetlands Program
*Data Sources (See General References in Bibliography):		
¹ Rees et al. 2010		
² MassGIS 2010		
³ MassGIS 2015		
⁴ NOAA 1975, Maietta 1984, Gil 1985		
⁵ MassGIS 2017		
⁶ does not include 34,777 acres of eel grass pasture		
⁷ open water and agricultural cranberry bogs excluded		



Figure 1. Major drainage systems, river basins (i.e., watersheds) and coastal drainage areas of Massachusetts with their unique Stream and River Inventory System (SARIS) code numbers, as assigned by Halliwell et al. 1982. These river basins and coastal drainage areas serve as the fundamental planning units of MassDEP's surface water monitoring, assessment and management programs.



COSTS AND BENEFITS OF CLEAN WATER

A complete assessment of the socioeconomic costs and benefits associated with restoring and maintaining the integrity of Massachusetts' waters is beyond the scope of this report. Nonetheless, a few examples of the financial commitments made to the protection and restoration of water resources, and the value of selected enterprises relying on those resources, can serve to illustrate the magnitude of the socioeconomic effects of clean water. The most significant financial commitment to the protection and restoration of water resources is the funding, through the State Revolving Fund (SRF) of both wastewater collection and treatment infrastructure and drinking water treatment and distribution systems. To date, approximately \$2.4 billion in federal grants and state matching funds have supported nearly \$7 billion in clean water and drinking water planning and construction projects. In 2018 approximately \$98.7 million and \$133.9 million in funding were allocated for wastewater and drinking water infrastructure, respectively (MassDEP et al. 2018).

The construction grant and loan programs are by no means the only sources of capital used to ensure clean water. Private industries and institutions pay for the installation and operation of wastewater treatment and pre-treatment facilities. Furthermore, water and wastewater infrastructure will not do the job alone. For example, the management of nonpoint sources (NPS) of pollution is best accomplished through the implementation of best management practices (BMPs) and responsible land use, so resources are needed to increase public awareness and stewardship. NPS pollution reductions through the application of BMPs are a cost-effective alternative to mechanical water treatment. Practicing water conservation instead of building and operating a water filtration plant can treat drinking water at one fifth of the cost. Planting, or improving, forest buffers instead of building and operating a wastewater treatment plant can reduce nitrogen inputs for less than half the cost. Constructed wetlands can treat wastewater at one sixth the cost of conventional treatment methods. Wetlands in the Boston area have been shown to provide \$42,000 worth of flood protection per acre (EPA 2012). The CWA section 319 addresses the identification and management of nonpoint sources of pollution and provides grant monies for the implementation of BMPs and public education programs. Since 1990, and extending through 2019, MassDEP has administered 303 section 319 nonpoint source management projects, which total just over \$65 million. Many other agencies, as well as non-governmental organizations, such as private institutions, watershed associations and citizen environmental advocacy groups, commit time and financial support to educating the public and promoting behaviors that will lead to cleaner waters in Massachusetts. It is difficult, however, to put a price tag on all this good work.

Economic benefits from clean water in Massachusetts are reflected in data and information on sport and commercial fisheries, recreation in and on the water, tourism, and property values. The following statistics may help to illustrate the extent of these benefits, but they are by no means comprehensive or complete. The US Fish and Wildlife Service and US Census Bureau (2013) reported that 532,000 recreational anglers fished a total of 8.3 million days in Massachusetts in 2011. Associated expenditures were \$455 million dollars, including food, lodging, transportation, fishing gear and associated equipment, licenses and fees, etc.

More recent information pertaining to revenues generated through the sale of fishing licenses and shellfishing permits in Massachusetts is summarized in the 2018 annual reports of the Massachusetts Division of Fisheries and Wildlife and Division of Marine Fisheries (DMF), respectively (MADFG 2018a, 2018b). Sales of freshwater fishing licenses exceeded \$3.1 million in FY2018, while over \$2.2 million in permit fees were collected from commercial fishermen, fish and shellfish dealers and other marine fisheries permittees.

The marine finfish and shellfish harvests for 2018 were valued at \$647 million. Because most finfish and shellfish species that comprise this commercial catch rely on near-shore waters and river estuaries for all or a portion of their lifecycles, the quality of freshwaters and their watersheds has a direct effect on the health of the offshore fishery. Reductions in ground stocks of commercially valuable fishes have been documented in the waters off New England for several years now, and this serious problem is likely attributed to a combination of environmental degradation, over-fishing and other factors that are difficult to quantify. Therefore, it is difficult to predict with certainty the direct monetary benefits to the commercial fishery from various steps taken to achieve clean water in Massachusetts' watersheds and coastal waters. Nonetheless, it stands to reason that a recovery in Massachusetts' marine fisheries cannot be accomplished if clean water is not restored and



maintained in those near-shore waters. The Massachusetts Estuaries Project (MEP) is currently addressing several water quality issues as they pertain to near-shore waters (see <https://www.mass.gov/guides/the-massachusetts-estuaries-project-and-reports>).

The Massachusetts tourism industry brought in \$24.9 billion in direct spending in 2019 that generated \$1.6 billion in state and local taxes (see [Stats & Reports \(visitma.com\)](#)). It is assumed that two-thirds of this travel was for leisure and that a substantial number of tourists were involved with water-related activities such as swimming, boating, fishing and viewing wildlife. Furthermore, much of Massachusetts' cultural history centers on its waterways that provided food and transportation to its endemic people and early settlers and hydropower and navigation during the industrial revolution. The aesthetic value of these waters and associated sites of interest is enhanced immeasurably by clean water. Again, although not quantified here, it is evident that the Massachusetts travel industry benefits directly from clean water and that ongoing pollution abatement will result in further economic gains for tourism. Finally, several studies have concluded that clean water has a positive effect on adjacent property values. For example, a study in Maine (Michael et al. 1996) demonstrated that lakefront properties were up to \$200 higher per frontage foot when water quality was good. Similarly, others (for example, Krysel et al. 2003) have shown that water clarity is essential to the enjoyment of lakes and ponds and that people are willing to pay to ensure that clean water is maintained.

In summary, a detailed analysis of the socioeconomic benefit of clean water to Massachusetts' residents would be complex and time-consuming and would be better undertaken as a separate study. Nonetheless, from the examples presented, it should be evident that the restoration and maintenance of clean water result in enormous benefit to the economy and quality of life in Massachusetts.

THE MASSACHUSETTS WATER POLLUTION CONTROL PROGRAM

An overview of the various program elements that comprise Massachusetts' water pollution control and related programs was provided in considerable detail in the narrative section of the 2016 IR. What follows is a summary of selected program elements with notable updates, where applicable.

Surface Water Quality Standards

The SWQS are found in the Code of Massachusetts Regulations (CMR) at chapter 314, section 4.00 and are available online at <https://www.mass.gov/regulations/314-CMR-4-the-massachusetts-surface-water-quality-standards>. The purpose of the SWQS regulation is to restore, enhance and protect the chemical, physical, and biological integrity of surface waters in Massachusetts. The SWQS designate the most sensitive uses for which surface waters are to be regulated, prescribe the minimum water quality criteria required to sustain those uses, and outline steps necessary to achieve designated uses and maintain high quality waters. The CWA and associated regulations require the EPA to approve applicable revisions to state water quality standards regulations following promulgation to become enforceable. The SWQS are comprised of a narrative section and accompanying tables and figures. The tables set forth special designated classifications and qualifiers for surface waters or segments of surface waters and list any site-specific criteria for surface waters or segments. The figures assist in identifying the general location of the surface waters and segments. The last revision to the SWQS was promulgated in 2013.

MassDEP is revising the SWQS with promulgation anticipated in Fall, 2021. MassDEP is updating selected components of the SWQS including: 1) revisions to the bacteria criteria protective of recreational waters; 2) adopting toxic pollutant criteria for protection of aquatic life and human health that were issued by EPA since 2002; 3) designating additional cold water streams based on recommendations from the DFG; 4) removal of unapproved copper site-specific criteria and updating site-specific zinc and nitrogen criteria; and 5) enhancing the consistency and clarity of the regulation.



TMDL Program and Long-term Vision Framework

Section 303(d) of the CWA and the EPA's Water Quality Planning and Management Regulations (40 CFR Part 130) require states to develop TMDLs for waterbodies that are not meeting designated uses under technology-based controls. The TMDL process establishes the maximum allowable loading of pollutants that a waterbody can receive and still meet the SWQS established for protecting public health and maintaining the designated beneficial uses of those waters. Through this process states implement water quality-based controls to reduce pollutant loadings from both point and nonpoint sources and restore and maintain the quality of their water resources.

A key component of the Section 303(d) listing process is establishing priorities for TMDL development. Since 2013, EPA has allowed state water quality programs to identify ways to enhance CWA program implementation and address the nationwide backlog of waterbodies requiring TMDLs. This initiative, referred to as the *EPA Long-term Vision Framework* was developed through a collaboration between the states, the Association of Clean Water Act Administrators and EPA with the goal of improving overall efficiency, focusing attention on priority waters, and acknowledging that states have other tools beyond TMDLs to attain water quality restoration and protection. For example, the *Long-term Vision Framework* allows states to address non-attainment of SWQS through the implementation of more immediately beneficial and practical Alternative Restoration Plans. The *EPA Long-term Vision Framework* provides a structure for managing CWA program activities to identify and address impairments. The six elements that make up the *EPA Long-term Vision Framework* are: *Prioritization, Assessment, Protection, Alternatives, Engagement, and Integration* (EPA 2013).

Massachusetts used the *EPA Long-term Vision Framework* as an organizing structure for stakeholder engagement to prioritize waterbodies for protection and restoration. A series of four workshops in 2017-2018, focused on the *six EPA Long-term Vision Framework elements to: collect input from* attendees, gain support and additional input on the long-term strategy for Massachusetts CWA programs. The stakeholder groups represented a broad demographic of federal and state partners as well as the regulated community and watershed groups. Input from stakeholders was collated by workshop and is available on MassDEP's Watershed Planning Program (WPP) webpage <https://www.mass.gov/info-details/watershed-planning-vision-process-workshops>.

Stakeholder feedback was invaluable in capturing lessons learned from many prior years of CWA program implementation, and the anticipation of new challenges in the years ahead. Several new initiatives were implemented by MassDEP as a direct result of stakeholder interests. Some of these accomplishments include: a Water Quality Monitoring grant program, initiated in 2019, that provided grants of \$5,000 to \$15,000 for bacteria monitoring to as many as 22 volunteer groups; workshops on developing Quality Assurance Project Plans (QAPPs) and data usability reviews; and the biennial electronic newsletter and web page highlighting WPP accomplishments.

Details pertaining to how MassDEP is currently applying the EPA's *Long-term Vision Framework* to prioritize waters for TMDL development or other restoration measures are presented later in this report (see "Prioritizing Waters for TMDL or Alternative Restoration Plans"). Looking to the future, *MassDEP's Vision* will focus on developing a process for prioritizing waterbodies for the development of TMDLs to address other water quality impairments. MassDEP will weigh factors such as the preponderance of specific pollutants, the potential for the recovery of the waterbody, designated uses, and geography. An emphasis will be placed on aligning available resources and partners to maximize the use of water quality investments for restoration efforts.

The EPA tracks the states' progress with completing TMDLs and Alternative Restoration Plans (collectively referred to as "Actions") in the Assessment and TMDL Tracking and Implementation System (ATTAINS), which can be accessed at <https://www.epa.gov/waterdata/attains>. The EPA assigns a unique identification (ID) number to each Action, which is included for reference in categories 4a and 5 of the 2018/2020 IR for those AUs with approved or final Actions. All TMDLs approved by the EPA and final Alternative Restoration



Plans for Massachusetts' waters through June 2020 are presented in Appendix 1 with their Action IDs and associated WPP document control numbers (CN). Actions approved or finalized on or after May 20, 2016 appear in Appendix 1 for the first time in this reporting cycle. However, only those Actions that apply to AUs in the newly assessed watersheds are reflected in the 2018/2020 IR. Actions for AUs in other watersheds will be updated for the 2022 reporting cycle. Individual TMDL and Alternative Restoration Plan documents are available at <https://www.mass.gov/lists/total-maximum-daily-loads-by-watershed>. For more information pertaining to the Massachusetts TMDL Program see <https://www.mass.gov/total-maximum-daily-loads-tmdls>.

Surface Water Discharge Permitting and Stormwater Programs

Information pertaining to the Surface Water Discharge Permitting Program can be accessed at: <https://www.mass.gov/service-details/surface-water-discharge-permitting-npdes>. Wastewater discharges to surface waters in Massachusetts are governed by permits issued in accordance with both the SWQS and guidelines set forth as part of the Federal National Pollutant Discharge Elimination System (NPDES) permit program. This system establishes levels of effluent quality that must be achieved at municipal, institutional and industrial treatment facilities to ensure that water quality standards are met in the receiving waters. Massachusetts has not been delegated the authority by the EPA to issue NPDES permits. Therefore, the EPA retains sole responsibility for the administration of the program, including drafting the discharge permits, conducting public hearings and issuing the final permits. The MassDEP provides state certification of the permit in accordance with section 401 of the CWA by issuing a separate state surface water discharge permit pursuant to the Massachusetts Clean Waters Act. Permits are developed to conform to both state and federal water pollution control laws and regulations.

The EPA's Stormwater Management Program began in the late 1990s with the regulation of medium (100,000 populace served) and large (250,000 served) municipal separate stormwater sewer systems (MS4), a wide range of industrial activities (controlled through the EPA's multi-sector general permits) and construction activities involving the disturbance of land area greater than five acres. Rather than limiting the concentration of individual constituents in stormwater, permit conditions emphasized the use of BMPs to manage stormwater. Facilities and construction sites are required to develop and implement stormwater management plans to control runoff, limit transport of pollutants off-site and to mitigate erosion and other habitat alterations associated with stormwater runoff.

The scope of the stormwater program was expanded in 2003 to include small municipalities (approximately 260 cities and towns in Massachusetts), and public entities that operate MS4 systems, such as highways, parks, colleges and prisons. The program requirements, established in 1999 by the EPA Storm Water Phase II regulations, are being implemented in over two-thirds of the municipalities in Massachusetts and several dozen other public MS4 systems using general permits. The 2016 Massachusetts Small MS4 General Permit was signed April 4, 2016 and published in the Federal Register on April 13, 2016. Following a one-year delay in the effectiveness date, the permit finally went into effect on July 1, 2018. The final permit reflects modifications to the 2014 draft small MS4 general permit released for comment on September 30, 2014 and replaces the 2003 small MS4 general permit for MS4 operators within Massachusetts. The final permit, appendices, and response to comment documents are available on EPA's website at <https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit> along with useful information and resources for stormwater management. Additional information pertaining to the management of stormwater in Massachusetts can be found at <https://www.mass.gov/info-details/stormwater>.

Nonpoint Source Pollution Control Program

In Massachusetts, water quality impairments associated with nonpoint source (NPS) pollution are assessed by MassDEP and reported through this report to EPA in fulfillment of reporting requirements of Sections 305(b), 303(d), and 314 of the CWA. A fundamental goal of the MassDEP Nonpoint Source Pollution (NPS) Program is to further characterize the sources of nonpoint source pollution, identify measures to remediate



sources of NPS pollution and implement measures such as BMPs to reduce pollution. Additional program goals include building partnerships, monitoring waters for NPS impairments to prioritize actions and determine progress, protecting unimpaired/high-quality and threatened waters from NPS pollution, and restoring water quality through focused NPS education and outreach.

The NPS program works to achieve its goals principally through two grant programs, the Water Quality Management Planning grant program (604(b) grants) and the Nonpoint Source Competitive Grants Program (319 grants). 604(b) grant funds are used to support the identification of nonpoint source water quality issues, determine the most effective solutions and provide preliminary designs for BMPs to address the identified issues. Each year, the NPS program, in collaboration with the EPA, provides 319 grant funds for projects that focus on the prevention, control, and abatement of nonpoint source (NPS) pollution, and achieve environmental results by restoring beneficial uses through the attainment of the Massachusetts SWQS. Watershed-based planning is an instrumental approach to setting and achieving nonpoint source pollution remediation goals. The NPS program, through both its grant programs, currently supports the development of watershed-based plans to protect unimpaired waters and restore impaired waters.

For a general overview of the NPS Program see: <https://www.mass.gov/info-details/nonpoint-source-pollution>. For specific information on grant opportunities and information about previously funded grant projects (indicative summaries) see: <https://www.mass.gov/info-details/grants-financial-assistance-watersheds-water-quality>.

Clean Water State Revolving Fund (SRF)

Information pertaining to the Massachusetts SRF for water pollution abatement projects and drinking water infrastructure can be accessed at <https://www.mass.gov/state-revolving-fund-srf-loan-program>. Administered jointly by the MassDEP's Division of Municipal Services and the Massachusetts Clean Water Trust (the Trust), the SRF was established to provide a low-cost financing mechanism to assist municipalities and wastewater districts/authorities seeking to comply with federal and state water quality requirements. The SRF loan program receives funding from the EPA in the form of an annual grant, supplemented by state matching funds and funds paid back by previous borrowers. The Trust, in turn, leverages these funds through the sale of bonds, resulting in a much larger pool of money to loan to borrowers.

Each year the MassDEP solicits water and wastewater infrastructure projects from Massachusetts municipalities and wastewater districts to be considered for subsidized loans, which are currently offered through a two percent interest rate loan. Certain nutrient removal projects may be eligible for zero percent interest rate loans. Financial assistance is available for planning and construction of infrastructure, including new water and wastewater treatment facilities and upgrades of existing facilities; infiltration/inflow correction; drinking water distribution and wastewater collection systems; control of combined sewer overflows; brownfields water resource infrastructure improvement; and nonpoint source pollution abatement projects, such as landfill capping, community programs for upgrading septic systems (Title 5) and stormwater remediation. In addition, non-structural projects are eligible for SRF funding; e.g., planning projects for nonpoint source problems that are consistent with the Massachusetts NPS Plan and that identify pollution sources and suggest potential remediation strategies. A priority ranking system, consisting of environmental, program and implementation criteria, is used to evaluate the proposed projects. The projects, borrowers and amounts that will be financed through the SRF are presented in annual Intended Use Plans (IUPs) that are publicly noticed for review and comment. See, for example, the 2021 Draft Clean Water IUP at <https://www.mass.gov/lists/2021-draft-srf-intended-use-plans>.



SURFACE WATER MONITORING AND ASSESSMENT

Surface Water Monitoring Program

MassDEP's surface water monitoring program is designed to provide data and information to support the four major objectives listed below.

- Assess the status or condition of Massachusetts' waters
- Develop, implement and evaluate pollution control strategies
- Develop policies and standards and identify emerging issues
- Measure the effectiveness of water quality management programs

Existing and proposed surface water monitoring program elements are described in *A Strategy for Monitoring and Assessing the Quality of Massachusetts' Waters to Support Multiple Water Resource Management Objectives 2016 - 2025* (the Monitoring Strategy) (MassDEP 2018b). The Monitoring Strategy, as well as general information concerning surface water monitoring, can be accessed at <https://www.mass.gov/service-details/water-quality-monitoring-program>.

MassDEP's monitoring program consists of a combination of probabilistic and deterministic sampling networks that are administered on both rotating watershed monitoring cycles and non-rotating, priority-driven schedules. In probabilistic or statistical monitoring networks, sampling sites are randomly chosen from a target population, such as wadable streams or lakes of a certain size and used to determine with a specified degree of confidence the status or condition of the entire population. Probabilistic surveys are a cost-effective means of reporting and communicating to decision-makers and the public about the condition of all waters within the target population without having to sample every river mile or lake acre in the state. Results of probabilistic surveys allow for regional or state-wide conclusions to be drawn, such as "X% of wadable streams support the aquatic life use", or "Y% of lakes and ponds support recreational uses".

In 2011, MassDEP initiated a five-year, state-scale probabilistic assessment of wadable streams and this was followed, from 2016 – 2018, by a three-year probabilistic survey of lakes and ponds. In 2020, a statistical assessment of coastal and estuarine waters was initiated. Known as the Massachusetts Coastal Condition Assessment, or MCCA, this network was designed to obtain the data needed to assess a waterbody's level of attainment of a single designated use: "suitable habitat for Fish, other Aquatic Life and Wildlife" (i.e., Aquatic Life). The random sampling design allows for the determination, with a known statistical confidence, of the percentage of coastal waters that are supporting and not supporting this use. The MCCA is administered collaboratively by the MassDEP and the Massachusetts Bays National Estuary Partnership (MassBays). MassBays serves as the project coordinator and manages the collection and analysis of field samples and data for the MCCA. A total of 90 coastal and estuarine sites will be monitored from 2020 – 2023.

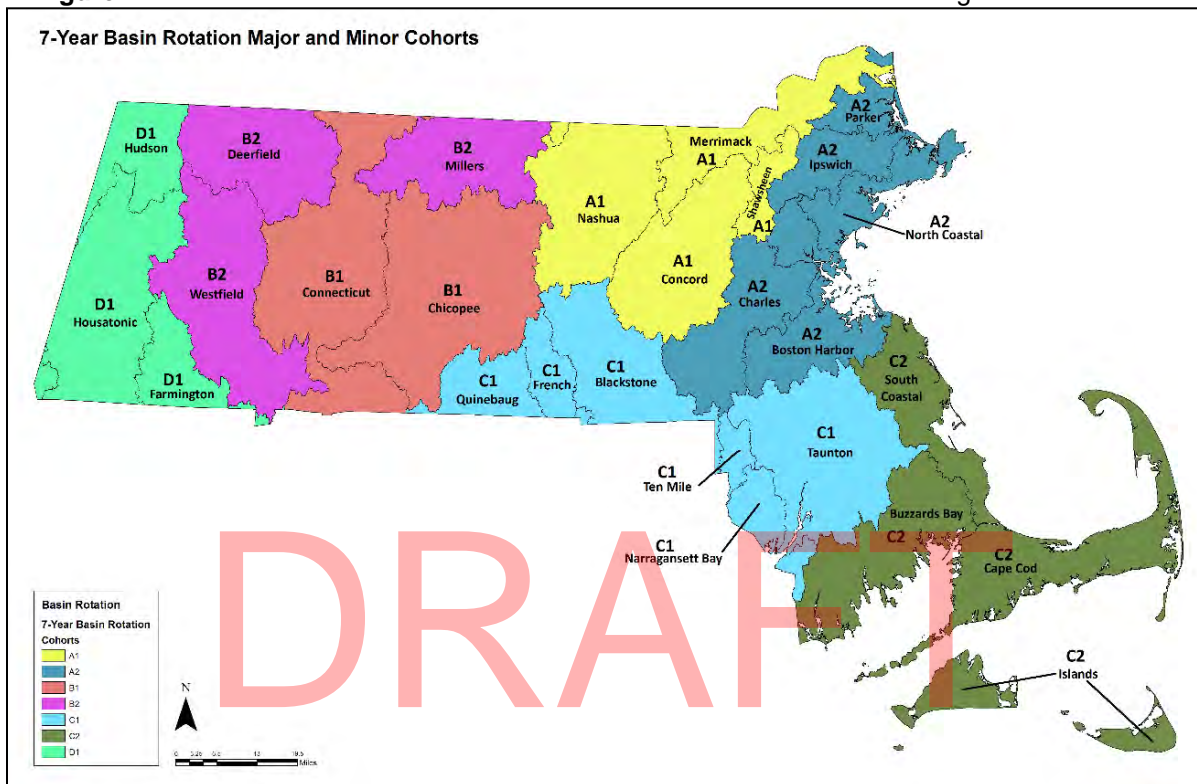
Deterministic, or targeted, monitoring involves the use of sampling sites specifically selected for monitoring to fill data gaps or answer questions pertaining to the waters they represent. Fixed-site networks, screening-level and intensive surveys and rotating watershed surveys are all examples of targeted monitoring. MassDEP relies on several deterministic monitoring program elements to inform decision making throughout the water resource management process (MassDEP 2018b).

Beginning in 2021 MassDEP is implementing a new seven-year adaptable watershed schedule for targeted surface water monitoring. The use of the watershed as a fundamental planning unit is an inherent theme in the MassDEP's water quality management programs and was a guiding principle in the development of the 2016 – 2025 Monitoring Strategy. As such, it remains a goal of the MassDEP to perform assessment monitoring on a rotating watershed schedule. The seven-year rotating schedule was designed to meet this goal while also providing some flexibility to perform priority-driven monitoring in fulfillment of data demands of other water management programs. The map in Figure 2 illustrates how Massachusetts' watersheds are arranged into four major groups or cohorts (A-D), each consisting of three to ten watersheds. In turn, each



major cohort is subdivided into one or two minor cohorts, each of which represents one year in the seven-year monitoring cycle. To meet priority data needs, monitoring resources may be applied disproportionately anywhere within a major cohort during any or all the time allotted to monitoring in that cohort (e.g., up to two years). Assessment monitoring was initiated in 2021 in Cohort A with emphasis on the A1 watersheds (Concord, Merrimack, Nashua and Shawsheen).

Figure 2. MassDEP Seven-Year Basin Rotation for Water Resource Monitoring



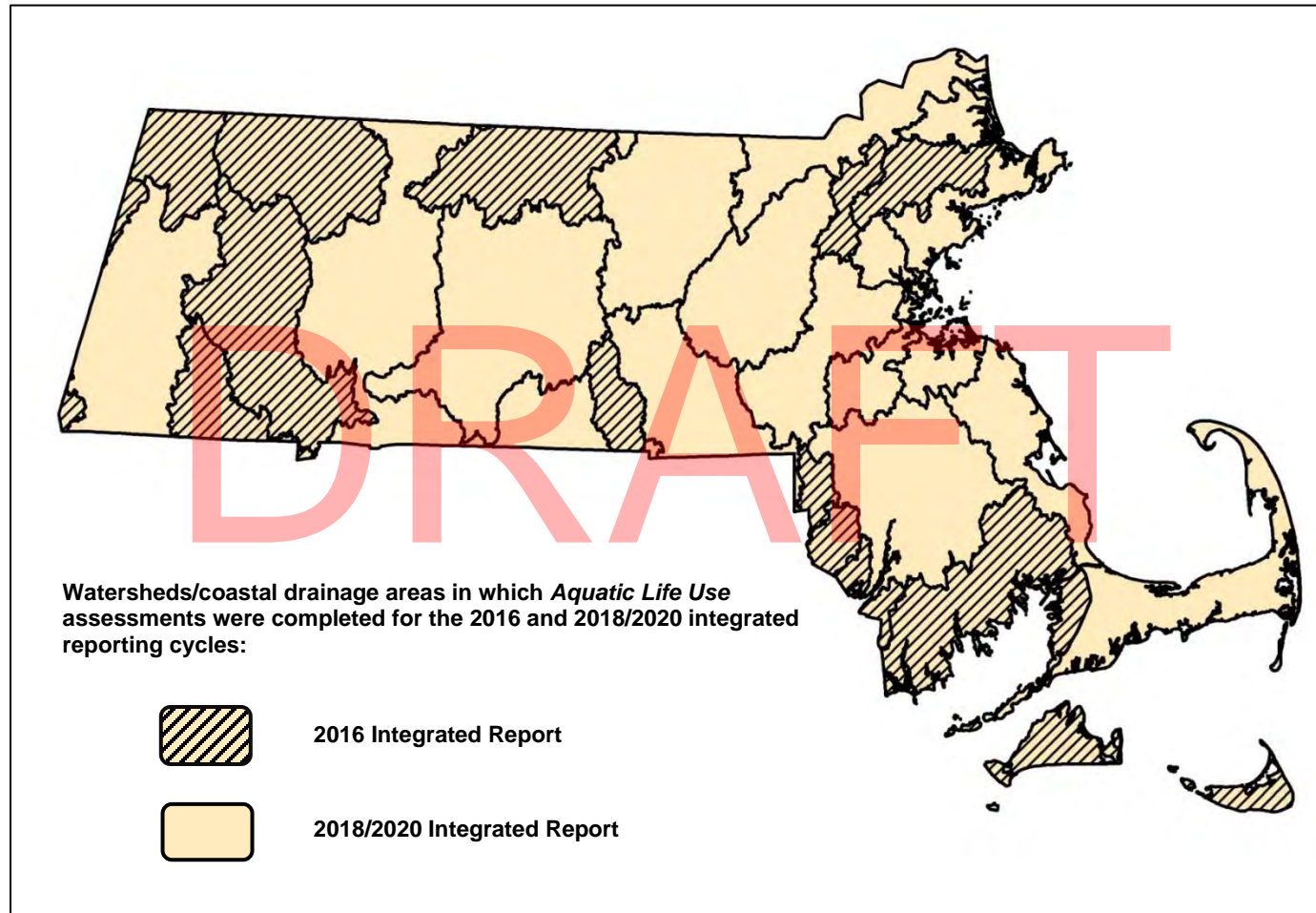
Assessment and Listing of Massachusetts' Waters

For the 2018/2020 CWA reporting cycle, MassDEP completed assessments of the aquatic life use attainment status of waterbodies in the watersheds that were not assessed for this use in the 2016 IR (MassDEP 2019). Figure 3 depicts how the aquatic life use assessments were split between the two reporting cycles. Listing changes were also made to waterbodies in these watersheds affected by finalized Alternative Restoration Plans, EPA approved TMDLs, and DPH fish edibility advisories issued since the 2016 IR was completed. New TMDL approvals and DPH fish advisories issued for waterbodies in watersheds assessed as part of the 2016 IR are *not* reflected in the 2018/2020 IR but will be updated for the 2022 IR.

The CALM Guidance Manual for the 2018/2020 reporting cycle is available at <https://www.mass.gov/files/documents/2018/05/07/2018calm.pdf>. This guidance document contains a summary of the SWQS that define the goals for water quality in the state, the requirements for assessing the quality of data to be used for CWA reporting, the methods of reviewing and applying water quality data and information to make assessment and listing decisions, and the use of EPA's ATAINS database for storing and reporting those decisions within the integrated reporting format.



Figure 3. Watersheds for which the aquatic life use support status of selected waters was assessed by the MassDEP for the 2016 and 2018/2020 Clean Water Act Sections 305(b)/303(d) reporting cycles. The 2016 integrated report (IR) included new assessments of the aquatic life use attainment status of selected waterbodies in 15 watersheds and coastal drainages, and statewide assessments of the fish consumption, shellfish harvesting, primary and secondary contact recreation and aesthetic uses. For the 2018/2020 IR, MassDEP's new assessments were limited to the aquatic life use support status of waterbodies in the watersheds and coastal drainages that were not assessed for this use in the 2016 IR. Other designated uses were not assessed. Individual watersheds and drainage areas are identified in Figure 1.



EPA requires states to assemble and evaluate all existing and readily available environmental data when preparing their CWA Section 303(d) lists (i.e., Category 5 of the IR). However, it is also EPA policy that any organization performing work for, or on behalf of, the EPA must establish a quality system to support the development, review, approval, implementation, and assessment of data collection operations. To this end, the MassDEP describes its Quality System in an EPA-approved Quality Management Plan to ensure that environmental data are of known and documented quality and are suitable for their intended use (MassDEP 2015). Furthermore, MassDEP works collaboratively with other federal and state agencies, watershed associations, citizen monitoring organizations and other interested groups to optimize the utilization of their data. The acquisition of valid scientific data is achieved, in part, by ensuring that all monitoring parties develop standard operating procedures and QAPPs that will increase the likelihood that these external data sources can be used for CWA section 305(b)/303(d) assessment and listing purposes.

Documentation of the assessment and listing decisions made for the 2018/2020 IR is being provided in individual decision summaries (see appendices 6-24 under separate cover) for each watershed and/or coastal drainage area assessed for 2018/2020. Each appendix summarizes the most recent assessment of the aquatic life use for every AU in the watershed and provides a table with all impairments *added, removed or changed* between the 2016 and 2018/2020 reporting cycles. Data and information supporting all decisions to remove impairments are also included in the decision summaries.

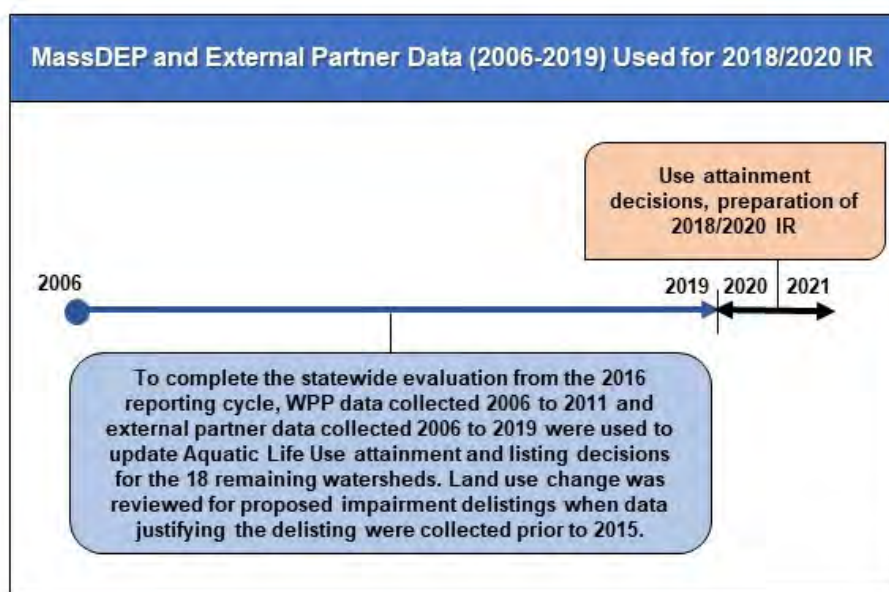
The assessment and listing decisions for the 2018/2020 IR were based on MassDEP's water and biological monitoring data, effluent and ambient water quality data submitted in fulfillment of NPDES permit requirements, and data from external sources, such as those described above. Although specific data sources are cited in the individual watershed decision summaries, most of the external sources of data used for the 2018/2020 assessments are listed below. In addition, the general time periods represented by those data are depicted in Figure 4.

- Massachusetts Department of Conservation and Recreation – Wachusett, Ware and Quabbin Subwatersheds
- Massachusetts DFG fish community sampling and Target Fish Community Models
- Massachusetts DMF diadromous fish passage information
- Massachusetts DPH – Harmful algae bloom reports and fish consumption advisories
- MWRA
- UMass-Dartmouth School of Marine Science and Technology (SMAST) MEP
- SMAST/Plymouth Ponds
- Housatonic Valley Association
- Upper Blackstone Water Pollution Abatement District
- Charles River Watershed Association
- Nashua River Watershed Association
- OARS for the Assabet, Sudbury and Concord Rivers
- Neponset River Watershed Association
- U.S. Geological Survey (USGS)
- EPA

The IR format allows states to meet the provisions of CWA sections 305(b), 303(d) and 314 by presenting the use-attainment status of all their assessed waters in a single, multi-part list. To that end, the MassDEP has placed each AU in one of five categories, as determined by ATTAINS. It should be noted here that ATTAINS does not contain AUs for all surface waters in Massachusetts, but only for those waters where AUs have been defined, typically for cases where assessments of one or more designated uses were completed at some time in the past. Surface waters that are not explicitly listed in the IR are considered Category 3 (i.e., no uses assessed) waters by default. As water quality monitoring and data collection efforts are carried out in waters not previously assessed AUs are defined and added to ATTAINS, resulting in greater representation of Massachusetts' surface waters with each new reporting cycle.



Figure 4



When the final version of the 2018/2020 IR is complete and Category 5 (i.e., the 303(d) List) is approved by the EPA, a spatial representation of the assessment and listing decisions will be made available to the public through an ArcGIS 10 geodatabase file and its supporting shapefiles and databases. These files can be downloaded from the MassGIS website once the IR is finalized. (For the 2016 IR, see: <https://www.mass.gov/info-details/massgis-data-massdep-2016-integrated-list-of-waters-305b303d>.)

PRIORITIZING WATERS FOR TMDL OR ALTERNATIVE RESTORATION PLANS

MassDEP Vision

Based on EPA's *Long-Term Vision Framework* (EPA 2013) described earlier in this document, the *MassDEP Vision* was developed to help provide clarity and increased public transparency on how the state prioritizes waterbodies for restoration or protection and to increase collaboration with partners to meet CWA goals. The *MassDEP Vision* is intended to increase the efficiency and effectiveness of the CWA 303(d) program in Massachusetts, with continued progress toward water quality improvement and protection. The *MassDEP Vision* sets water quality priorities, supports stakeholder-driven priorities and emphasizes improved water quality through restoration and protection measures.

MassDEP is striving to improve efficiency in the TMDL program and to produce better environmental results by grouping problems with similar causes and focusing on multiple waters at the same time. Review of Massachusetts' 303(d) List submittals reveals that approximately 60% of the impaired waters in the state are impaired by bacteria and/or nutrients; therefore, these pollutants are clearly priorities for restorative actions such as TMDL or Alternative Restoration Plans. The list of priority projects, by watershed, for TMDL development through 2022 is presented in Table 2. Since many of these projects carry over from year to year, detailed schedules for beyond FY2022 are speculative. Ongoing restoration efforts are described in more detail below.



Table 2. Total Maximum Daily Loads (TMDLs) scheduled by the MassDEP for development through State Fiscal Year (SFY) 2022.

Project	Assessment Unit Count	Required Public Meeting Held?	Draft TMDL	Projected EPA Approval of Final TMDL
Bacteria TMDLs				
Parker River	9	yes	Final Approved	SFY 2021
Blackstone	19	no	In Progress	SFY 2022
Nashua	18	no	In Progress	SFY 2022
Concord	17	no	In Progress	SFY 2022
Ten Mile River	7	no	In Progress	SFY 2022
Connecticut	15	no	In Progress	SFY 2022
Deerfield	7	no	In Progress	SFY 2022
Hoosic	3	no	In Progress	SFY 2022
Housatonic	4	no	In Progress	SFY 2022
Westfield	10	no	In Progress	SFY 2022
Chicopee	17	no	In Progress	SFY 2022
French	4	no	In Progress	SFY 2022
Quinebaug	7	no	In Progress	SFY 2022
Millers	1	no	In Progress	SFY 2022
Subtotal Bacteria	138			
Massachusetts Estuaries Project (MEP) Nitrogen TMDLs				
Plymouth-Kingston-Duxbury Harbors	2	no	In Progress	SFY 2022
Menemsha-Squibnocket Harbors	2	no	In Progress	SFY 2022
Wellfleet Harbor	2	no	In Progress	SFY 2022
Subtotal Nitrogen	6			
Total Phosphorus TMDLs				
Monponsett Ponds	4	yes	Completed	SFY 2021
Subtotal Phosphorus	4			
Grand Total TMDL	148			

Bacteria TMDLs

MassDEP is currently drafting a comprehensive freshwater TMDL to cover 129 waterbody segments impaired for *E. coli*, enterococcus, and/or fecal coliform within 13 watersheds in central and western Massachusetts. This TMDL was developed using a watershed framework. Information common to all the impaired river segments is contained in the main body of the report, or Core document, while information specific to each impaired river segment is included in a watershed specific appendix. This watershed TMDL will reflect the revisions to the SWQS anticipated in 2021 regarding recreational swimming standards for bacteria. A public release of this TMDL for review and comment is planned for mid-2022.



The Massachusetts Estuaries Project (MEP)

The MassDEP continues to derive TMDLs for nutrient-impaired coastal embayments in southeastern Massachusetts through collaboration with SMAST, local municipalities and non-governmental organizations. This effort, referred to as the MEP, was initiated in 2001 to determine existing nutrient loads and reductions needed for estuaries located in 32 coastal communities.

Through 2020, a total of 144 individual nitrogen TMDLs within 50 estuarine systems in the Buzzards Bay, Islands and Cape Cod coastal drainage systems have been approved by the EPA. Technical evaluations have been completed for three more estuarine systems that require development of TMDLs as listed in Table 2. MassDEP will continue to assess nutrient-impaired coastal waters and develop nitrogen TMDLs for priority embayments in southeastern Massachusetts. MassDEP is currently working to identify data needs and the methodology to address an additional 16 to 20 estuaries in the coming years.

Mystic River Eutrophication Study and Alternative Restoration Plan

The Mystic River is included on the Massachusetts CWA section 303(d) list as impaired by phosphorus, dissolved oxygen supersaturation, chlorophyll-a, and secchi-disk transparency, among several other pollutants. Consistent with the *Long-Term Vision Framework* for the the CWA Section 303(d) Program, MassDEP worked in partnership with EPA Region 1, the Mystic River Watershed Association, the USGS, and the MWRA to develop a nutrient management strategy for the Mystic River (ERG 2020). Cultural eutrophication, the degradation of aquatic environments by nutrient pollution caused by human activity and urban development, is a major cause of impairments in the watershed as evidenced by excessive algal and macrophyte growth and harmful cyanobacteria blooms. Regular occurrences of severe algal blooms during the summer months reduce water clarity and contribute to anoxic bottom waters that do not support aquatic life. Algal blooms and macrophyte growth degrade the aesthetic quality of the river, reduce water clarity, and impair designated uses such as fishing and boating.

This Mystic River Alternative Restoration Plan is aligned with the EPA *Long-Term Vision Framework* and allows MassDEP to address non-attainment of nutrient related SWQS through more immediately beneficial and practical restoration approaches. The Mystic River Alternative Restoration Plan approach is based on rigorous data gathering, scientific analysis, and modeling, which has been used to provide guidance to communities. Watershed analyses conducted during this study demonstrate that inadequately controlled stormwater runoff from developed landscapes is the predominant source of phosphorus loads to the surface waters of the Mystic River watershed. Under existing conditions, the study estimated that 67% reduction of stormwater phosphorus loads from the watershed is needed to meet the chlorophyll-a water quality target for attaining SWQS in the most impacted watershed area, the lower Mystic River. MassDEP and EPA have already begun working with watershed communities to develop stormwater management strategies to begin implementing effective stormwater control measures to restore the river and degraded lakes and ponds.

The Alternative Restoration Plan for the Mystic River is the first of its kind accepted by EPA in Massachusetts and in EPA Region 1. It is important to note that the waterbodies included in the Alternative Restoration Plan remain on the 303(d) list (Category 5a) until SWQS are met or until a traditional TMDL is completed. The Mystic Alternative Restoration Plan will lead to the restoration of seven individual named waterbodies (9 AU) that comprise 18.7 river miles and 582.6 acres of surface water impoundments.



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INTEGRATED LIST CATEGORIES

The following tables present the multi-part integrated list of waters developed in accordance with EPA guidance pertaining to sections 303(d), 305(b) and 314 of the Clean Water Act. The list contains Massachusetts waterbodies (lakes, rivers, or estuaries) that have been monitored and assessed, either in past cycles or in the current cycle, and that fall into one of the categories listed below, depending upon the attainment status of their designated uses. Note that ATTAINS calculates the category for both the individual impairments and the overall AU. The overall AU category, presented in the category tables below, is dictated by the use attainment and the combination of impairment categories. Surface waters that have never been assessed do not appear in these tables and are considered Category 3 waters by default.

- Category 1 – “Waters attaining all designated uses”
- Category 2 – “Attaining some uses; other uses not assessed”
- Category 3 – “No uses assessed”
- Category 4a – “All TMDLs are completed”
- Category 4b – “Impairment controlled by alternative pollution control requirements”
- Category 4c – “Impairment not caused by a pollutant – TMDL not required”
- Category 5 – “Waters requiring one or more TMDL(s)” (i.e., the 303(d) List)
- Category 5a – “303(d)-listed waters for which Alternative Restoration Plans have been completed”

The Massachusetts Department of Public Health statewide advisory pertaining to the prohibitive consumption of finfish by sensitive populations precludes any waters from being in full support of the fish consumption use and, therefore, no waters appear in Category 1.

Category 2 is the only list that presents the individual designated uses that are attained by each waterbody. However, it should be noted that waters appearing in categories 4a, 4c and 5, while impaired for one or more uses, may also be attaining some uses. The supported uses are not currently included in categories 4a, 4c and 5 due to space constraints.

Category 3 contains waterbodies that are not assessed for any of their individual designated uses for the 2018/20 listing cycle unless those waterbodies were listed as impaired in previous listing cycles. In that case they remain in categories 4a, 4c or 5.

Categories 4 and 5 contain waterbodies that are impaired by one or more *pollutants*, requiring the development and implementation of TMDLs to restore them (listed in Category 5 – “303(d) List”), and/or *pollution* (i.e., non-pollutants), managed through alternative control measures (listed in Category 4c unless pollutants are also present). Waterbodies are listed in Category 4a if all pollutants contributing to their impairment are addressed by one or more EPA-approved TMDLs. Impaired waters for which some TMDLs have been approved, but others are still needed, remain in Category 5 until TMDLs are completed for all pollutants. Non-pollutants (shown in parentheses) may occur in categories 4a, 4c or 5 depending on the presence and TMDL status of pollutants. Category 4b is reserved for waters impaired by one or more pollutants that are expected to attain their designated uses without TMDL implementation; however, Massachusetts is not including any waters in Category 4b for the 2018/2020 listing cycle. Category 5a is an organizing tool to clearly articulate which listed waters have Alternative Control Plans, and to provide transparency to the public. Only waterbodies for which all pollutant impairments have an alternative restoration plan in place would be categorized as 5a.

Appendices 2 – 5 are provided to assist the reader in navigating the multi-part list. Appendix 2 presents a description of every AU represented in the IR and indicates the list category in which each AU appears. Appendices 3, 4 and 5 list the impairments *added, removed or otherwise changed* between the 2016 and 2018/2020 IR cycles. Appendices 3 and 4 list, respectively, the impairments *added to* and *removed from* categories 4 and 5 and a brief explanation of why these changes occurred. Appendix 5 summarizes changes to impairments that are not actual additions or removals. The impairment additions and removals presented in appendices 3 and 4 include minor clerical or “housekeeping” adjustments as well as more



substantive changes informed by new data and information or by modifications to the assessment methodology. For example, changes in impairment names from “Non-native aquatic plants” to a specific species of non-native plants, or “Metals” to “Unspecified Metals in Sediment” are listed as both removals and additions in the appendices, but do not represent actual changes in the status of the waters exhibiting these impairments. Likewise, an impairment that changed status from pollutant to non-pollutant (for example, “Aquatic Plants (Macrophytes)”) appears in Appendix 4 as removal from category 5, yet the waterbody in question remains listed as impaired. Impairments with new TMDL associations also appear as changes in Appendix 4. Changes made between the proposed and final versions of the 2018/20 integrated list are presented in Appendix 25.

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Category 1 waters - “Waters attaining all designated uses”

Massachusetts is currently listing no waters in this category due to the issuance by the Massachusetts Department of Public Health of a statewide health advisory pertaining to the consumption of finfish. This advisory precludes any waters from being in full support of the fish consumption use.

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Category 2 waters listed alphabetically by major watershed
"Attaining some uses; other uses not assessed"
(Attained uses denoted by "X")

					Uses Attained					
Waterbody	AU_ID	Description	Size	Units	Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Blackstone										
Cold Spring Brook	MA51-42	Headwaters, perennial portion north of Route 16, Uxbridge to mouth at inlet Rivulet Pond, Uxbridge.	1.10	Miles	X		X	X	X	
Dark Brook	MA51-49	Headwaters, outlet Dark Brook Reservoir, Auburn to mouth at inlet Stoneville Pond (east of Wallace Avenue), Auburn.	1.30	Miles	X		X	X	X	
Emerson Brook	MA51-29	Headwaters, outlet Lee Pond, Uxbridge to mouth at confluence with the Blackstone River, Uxbridge.	1.90	Miles	X		X	X	X	
Kettle Brook	MA51-19	Outlet Kettle Brook Reservoir #4, Paxton, to inlet Kettle Brook Reservoir #1, Leicester (as of 2010 excluding approximately 0.8 mile through segment Kettle Brook Reservoir #3 MA51081 and approximately 0.5 mile through segment Kettle Brook Reservoir #2MA51080).	1.90	Miles			X			
Laurel Brook	MA51-23	Headwaters, perennial portion, north of Yew Street, Douglas to mouth at confluence with Scadden Brook near the outlet of Sawmill Pond, Uxbridge (through former 2008 segment: Bazely Pond MA51008).	3.30	Miles			X			
Miscoe Brook	MA51-21	Headwaters, perennial portion, east of Adams Road, Grafton to mouth at inlet Silver Lake, Grafton (through former 2008 segment: Cider Millpond MA51019).	1.90	Miles			X			
Miscoe Brook	MA51-37	Headwaters, perennial portion, from the Mendon/Upton/Northbridge corporate boundaries to mouth at confluence with Taft Pond Brook, Northbridge/Upton.	0.70	Miles			X			
Mumford River	MA51-13	Headwaters, outlet Tuckers Pond, Sutton to Douglas WWTP discharge (NPDES: MA0101095), Douglas.	4.20	Miles	X		X	X	X	
Scadden Brook	MA51-24	Headwaters, perennial portion, north of Davis Street, Douglas to mouth at inlet Lee Pond, Uxbridge (through former 2008 segment: Lee Reservoir MA51086).	2.40	Miles			X			
Scott Brook	MA51-53	Headwaters west of Reservoir Street, Holden to mouth at inlet Holden Reservoir 1, Holden.	0.80	Miles			X			
Spring Brook	MA51-25	Headwaters, perennial portion, north of Lovell Street, Mendon to mouth at confluence with Muddy Brook, Mendon.	1.90	Miles			X			
Taft Pond Brook	MA51-26	Headwaters, outlet Taft Pond, Upton to mouth at confluence with West River, Northbridge.	1.20	Miles	X		X	X	X	
Tatnuck Brook	MA51-48	Headwaters, south of Brennan Way, Holden to inlet Holden Reservoir 1, Holden.	1.30	Miles			X			
Tinkerville Brook	MA51-22	Headwaters, perennial portion, north of Walnut Street, Douglas to Rhode Island border, Douglas.	2.40	Miles			X			



Category 2 waters listed alphabetically by major watershed
"Attaining some uses; other uses not assessed"
(Attained uses denoted by "X")

Waterbody	AU_ID	Description	Size	Units	Uses Attained					
					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Unnamed Tributary	MA51-46	Unnamed Tributary eventually to Tatnuck Brook, headwaters, perennial portion, east of Bailey Road, Holden to mouth at confluence with unnamed tributary to Tatnuck Brook, Holden.	0.30	Miles	X			X	X	
Unnamed Tributary	MA51-51	Unnamed tributary to Wallis Pond, headwaters south of Webster Street (Route 16), Douglas to mouth at inlet of Wallis Pond, Douglas.	1.80	Miles			X			
Unnamed Tributary	MA51-52	Unnamed tributary to Manchaug Pond, headwaters west of Oak Street, Douglas to mouth at inlet of southwestern lobe of Manchaug Pond, Douglas.	0.60	Miles			X			
Wallum Lake	MA51172	Douglas (size indicates portion in Massachusetts excluding approximately 30 acres; these 30 acres represent "All Interstate surface waters that are public water supply in Rhode Island from 1000 feet upstream of the State Line" which are designated as Class A/PWS/ORW in 314CMR4.00, January 2007).	109.00	Acres				X	X	
Warren Brook	MA51-47	Headwaters, west of North Street, Upton to mouth at confluence with West River, Upton.	3.60	Miles	X		X	X	X	
Wellman Brook	MA51-50	Headwaters, outlet unnamed pond east of Martin Road, Douglas to mouth at inlet of Gilboa Pond (an impoundment of the Mumford River), Douglas.	0.90	Miles			X			
West Brook	MA51-43	Headwaters, perennial portion west of Route 290 and north of Gulf Street, Shrewsbury to culvert entrance between Baker and Elmo avenues, Shrewsbury (isolated Quinsigamond River tributary) (through former 2014 segment: Mill Pond MA51105).	3.20	Miles	X		X	X	X	
Boston Harbor: Mystic										
Spot Pond Brook	MA71-17	Headwaters outlet Spot Pond, Stoneham to mouth at confluence with Malden River, south of Charles Street, Malden (approximately 55% culverted).	3.50	Miles			X			
Boston Harbor: Neponset										
Mill Brook	MA73-12	Source northeast of Ledgewood Drive, Dover to inlet of Pettee Pond, Westwood.	2.90	Miles	X		X	X	X	
School Meadow Brook	MA73-06	Headwaters, outlet of Ganawatte Farm Pond, Walpole to confluence with Neponset River, Walpole.	1.90	Miles	X		X	X	X	
Traphole Brook	MA73-17	Headwaters west of Everett Street, Sharon, to confluence with Neponset River, Sharon.	3.90	Miles	X		X	X	X	
Tubwreck Brook	MA73-07	Headwaters - small unnamed pond southeast of Powissett Street, Dover to confluence with Mill Brook just southwest of Dover/Medfield border.	1.60	Miles	X		X	X	X	



Category 2 waters listed alphabetically by major watershed
"Attaining some uses; other uses not assessed"
(Attained uses denoted by "X")

Waterbody	AU ID	Description	Size	Units	Uses Attained					
					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Unnamed Tributary	MA73-35	Unnamed tributary to Beaver Brook, headwaters outlet small unnamed pond east of Moose Hill Street, Sharon to mouth at confluence with Beaver Brook, Sharon.	0.50	Miles			X			
Boston Harbor: Weymouth & Weir										
Eel River	MA74-21	Headwaters, east of Route 228, near West Moreland Street, Hingham to mouth at confluence with Plymouth River, Hingham.	1.50	Miles			X			
Hoosicwhisick Pond	MA74015	Milton.	23.00	Acres				X	X	
Buzzards Bay										
Aucoot Cove	MA95-09	From the boundary of Division of Marine Fisheries designated shellfishing growing area BB31.1, north and southwest from Haskell Island, Marion to the mouth at Buzzards Bay demarcated by a line drawn between Converse Point, Marion and Joes Point, Mattapoisett (prior to 2008 this segment included the restricted shellfishing portion of cove and the estuarine portion of Aucoot Creek).	0.46	Square Miles			X	X	X	X
Barrett Pond	MA95004	Carver.	11.00	Acres				X	X	
Charge Pond	MA95025	Plymouth.	16.00	Acres				X	X	
College Pond	MA95030	Plymouth.	47.00	Acres				X	X	
Curlew Pond	MA95034	Plymouth.	43.00	Acres				X	X	
Dunhams Brook	MA95-73	Headwaters east of the intersection of Cornell and Main roads, Westport to the confluence with the West Branch Westport River at Hicks Cove, Westport.	1.40	Miles			X			
Fearing Pond	MA95054	Plymouth.	23.00	Acres			X	X	X	
Giles Creek	MA95-89	From Demarest Lloyd Memorial State Park, Dartmouth to mouth at Slocums River, Dartmouth.	0.06	Square Miles			X			
Horseneck Channel	MA95-87	From the outlet of The Let to the confluence with the East Branch Westport River (east of Route 88), Westport.	0.24	Square Miles			X	X	X	X
Little River	MA95-66	Dartmouth.	0.18	Square Miles			X	X	X	
Marys Pond	MA95100	Rochester.	81.00	Acres			X			
Red Brook	MA95-74	Headwaters, outlet cranberry bogs east of Bartlett Pond, Wareham to Red Brook Road, Wareham/Plymouth.	2.80	Miles			X			



Category 2 waters listed alphabetically by major watershed
"Attaining some uses; other uses not assessed"
(Attained uses denoted by "X")

Waterbody	AU ID	Description	Size	Units	Uses Attained					
					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Sippican Harbor	MA95-69	The waters between a line demarcating the mouth of the harbor (from Converse Point to Butler Point, Marion) and a line from Allens Point, Marion around the southeastern tip of Ram Island, then westerly from the southern tip of Ram Island, to the point of land south of Nyes Wharf, Marion excluding Blanketship Cove and Planting Island Cove (formerly reported as a portion of segment MA95-08).	1.94	Square Miles			X	X	X	X
The Let	MA95-88	From north of East Beach Road, Westport to the confluence with Horseneck Channel, Westport.	0.22	Square Miles			X			
Unnamed Tributary	MA95-75	Unnamed tributary to Bread and Cheese Brook, headwaters north of Briggs Road, Westport to confluence with Bread and Cheese Brook, Westport.	1.90	Miles			X			
Unnamed Tributary	MA95-80	Unnamed tributary to Aucoot Creek, headwaters west of Mill Street (Route 6), Marion to the Marion WWTF (MA0100030) discharge, Marion.	0.40	Miles			X			
Unnamed Tributary	MA95-81	Unnamed tributary to Aucoot Creek from the Marion WWTF (MA0100030) discharge, Marion to the boundary of the saltwater wetland, Marion.	0.70	Miles			X			
Unnamed Tributary	MA95-84	Unnamed tributary to Snell Creek, perennial portion north of Brookwood Drive, Westport to mouth at Snell Creek, Westport.	0.80	Miles	X		X	X	X	
Wenham Pond	MA95158	Carver.	46.00	Acres	X		X			
Cape Cod										
Chatham Harbor	MA96-10	Harbor, bounded on east by Cape Cod National Seashore (CCNS), with northern extent as an imaginary line drawn northeast from northern tip of Strong Island to a point on inner CCNS and western extent as an imaginary line drawn from southern tip of Strong Island south to Allen Point including waters south to an imaginary line along northern edge of South Beach Bar extending from Chatham Lighthouse to inlet created by 1987 storm, Chatham (area within CCNS designated as ORW).	2.85	Square Miles				X	X	X
Coonamessett River	MA96-69	Headwaters, outlet Coonamessett Pond, Falmouth to mouth at inlet Great Pond, Falmouth.	3.40	Miles	X		X	X	X	
Crows Pond	MA96-47	To Bassing Harbor, Chatham.	0.19	Square Miles			X	X	X	X
Herring River	MA96-106	Headwaters, outlet Hinckleys Pond, Harwich to mouth at inlet Herring River Reservoir, Harwich.	2.50	Miles	X		X	X	X	
Marstons Mills River	MA96-127	Headwaters outlet Middle Pond, Barnstable to salt water portion approximately 1000 feet south of Route 28 (Falmouth Road), Barnstable.	2.00	Miles			X			
Mashpee River	MA96-89	Headwaters, outlet Mashpee Pond, Mashpee to Quinacisset Avenue, Mashpee.	2.70	Miles	X		X	X	X	



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Waterbody	AU ID	Description	Size	Units	Uses Attained					
					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Red Brook	MA96-25	From dam (NATID: MA01037) at Red Brook Road, Falmouth/Mashpee to mouth at inlet Hamblin Pond, Falmouth/Mashpee.	0.01	Square Miles				X	X	X
Seapit River	MA96-122	From confluence of Childs River and Eel Pond, Falmouth to inlet Waquoit Bay, Falmouth.	0.05	Square Miles			X			
Unnamed Tributary	MA96-105	Unnamed tributary to Herring River, headwaters outlet Walkers Pond, Harwich to outlet channelized wetland south of Great Western Road, Harwich.	3.30	Miles	X			X	X	
Upper Mill Pond	MA96324	Brewster.	249.00	Acres	X		X	X	X	
Charles										
Dopping Brook	MA72-40	Headwater outlet small unnamed pond on Holliston/Sherborn border to mouth at confluence with Bogastow Brook, Holliston/Sherborn.	2.60	Miles	X		X	X	X	
Godfrey Brook	MA72-51	Perennial portion, South Main Street, Milford to mouth at confluence with the Charles River, Milford.	0.70	Miles			X			
Mill Brook	MA72-39	Source wetlands, Pine Street, Medfield to mouth at confluence with the Charles River, Medfield.	3.70	Miles	X		X	X	X	
Shepards Brook	MA72-50	Perennial portion, north of Brook Street, Franklin to mouth at confluence with Charles River, Franklin.	2.30	Miles			X			
Chicopee										
Atherton Brook	MA36-30	Headwaters, confluence Town Farm and Osgood brooks, Shutesbury to mouth at inlet Quabbin Reservoir, Pelham.	1.90	Miles			X			
Bottle Brook	MA36-46	Headwaters, perennial portion, east of Dunhamtown Brimfield Road, Brimfield to mouth at confluence with Quaboag River, Brimfield.	2.00	Miles	X		X	X	X	
Bradish Brook	MA36-58	Headwaters, perennial portion east of New Braintree Road, West Brookfield to Wickaboag Valley Road and inlet of swamp east of Wickaboag Pond, West Brookfield.	0.70	Miles			X			
Briggs Brook	MA36-61	Headwaters, outlet unnamed pond west of Daniel Shays Highway (Route 202), Shutesbury to mouth at inlet Quabbin Reservoir, Pelham.	1.40	Miles			X			
Burnshirt River	MA36-37	Headwaters, outlet Stone Bridge Pond, Templeton/Phillipston to mouth at confluence with Canesto Brook, Barre (through former 2008 segment: Williamsville Pond MA36167).	8.60	Miles	X		X	X	X	
Cadwell Brook	MA36-54	Headwaters, south of Mt. Marcy, Wilbraham to mouth at confluence with Twelvemile Brook, Wilbraham.	1.80	Miles			X			
Cadwell Creek	MA36-29	Headwaters east of Route 202 and northwest of Dodge Hill, Pelham to mouth at inlet Quabbin Reservoir, Belchertown.	3.20	Miles			X			
Calkins Brook	MA36-26	Headwaters, perennial portion, southeast of Baptist Hill, Palmer to mouth at confluence with Twelvemile Brook, Wilbraham.	2.70	Miles	X		X	X	X	



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					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Camel Brook	MA36-63	Headwaters, perennial portion north of Cooleyville Road in the Shutesbury State Forest, Shutesbury to mouth at confluence with West Branch Swift River, Shutesbury.	1.40	Miles			X			
Canesto Brook	MA36-36	Headwaters, perennial portion, northwest of Hubbardston State Forest near Hubbardston/Templeton town line to mouth at confluence with Ware River, Barre.	7.30	Miles			X			
Chicopee River	MA36-23	Red Bridge Impoundment Dam (NATID: MA00723), Wilbraham/Ludlow to Wilbraham Pumping Station (old WWTP), Wilbraham/Ludlow.	3.80	Miles	X		X	X	X	
Cobb Brook	MA36-62	Headwaters, perennial portion east of Town Farm Road, Shutesbury to mouth at inlet Quabbin Reservoir, Shutesbury.	1.60	Miles			X			
Conant Brook	MA36-45	Headwaters, outlet Conant Brook Reservoir dam (NATID: MA00965), Monson to mouth at confluence with Chicopee Brook, Monson.	1.90	Miles	X		X	X	X	
Cooley Brook	MA36-38	From the outlet of Chicopee Reservoir, Chicopee to mouth at confluence with the Chicopee River, Chicopee (segment mileage includes length of channelized diversion south of Route 90, a "braid" that conflues with the Chicopee River upstream of the mouth of Cooley Brook).	1.20	Miles			X			
East Branch Fever Brook	MA36-47	Headwaters, outlet Brooks Pond, Petersham to mouth at inlet Quabbin Reservoir, Petersham.	5.20	Miles			X			
East Branch Swift River	MA36-35	Headwaters, confluence of Shattuck and Popple Camp brooks, Phillipston to mouth at inlet Pottapaug Pond, Petersham (through former 2008 segment: Connor Pond MA36039).	9.80	Miles			X			
East Branch Ware River	MA36-01	Headwaters, outlet Bickford Pond, Hubbardston to mouth at confluence with West Branch Ware River (forming headwaters of Ware River), Barre.	12.40	Miles	X		X	X	X	
Hop Brook	MA36-32	Headwaters, perennial portion, upstream of West Street, New Salem to mouth at inlet Quabbin Reservoir, New Salem.	3.70	Miles			X			
Jabish Brook	MA36-43	Headwaters, outlet Knights Pond, Belchertown to Jabish Canal, Belchertown.	7.50	Miles	X		X	X	X	
Joslin Brook	MA36-44	Headwaters, outlet Lovewell Pond, Hubbardston to mouth at confluence with Mason Brook, Hubbardston.	3.30	Miles	X		X	X	X	
Middle Branch Swift River	MA36-33	Headwaters just north of portions of Wendell and New Salem State Forests (south of the Swift River School), Wendell to mouth at inlet Quabbin Reservoir, New Salem.	6.90	Miles			X			
Moose Brook	MA36-51	Headwaters, outlet small unnamed pond north of Route 32, Barre to mouth at confluence with Ware River, Hardwick.	8.00	Miles	X		X	X	X	
Pinnacle Creek	MA36-55	Headwaters, outlet unnamed pond north of Peck Road, Monson to mouth at confluence with Twelvemile Brook, Monson.	1.00	Miles			X			



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					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Pleasant Brook	MA36-68	Headwaters, east of Williamsville Road, Barre to mouth at confluence with Prince River, Barre.	3.40	Miles			X			
Popple Camp Brook	MA36-67	Headwaters, perennial portion north of Lincoln Road, Phillipston to mouth at confluence with Shattuck Brook (forming headwaters East Branch Swift River), Phillipston.	1.70	Miles			X			
Roaring Brook	MA36-56	Headwaters, west of Summit Street, Belchertown to confluence with Broad Brook Canal/Jabish Canal, Belchertown.	2.80	Miles			X			
Rocky Run	MA36-64	Headwaters, north of Freeman Road, Shutesbury to mouth at confluence with West Branch Swift River, Shutesbury.	1.70	Miles			X			
Turkey Hill Brook	MA36-49	Outlet Thompsons Pond, Spencer to mouth at confluence with Sevenmile River, Spencer.	3.90	Miles	X		X	X	X	
Underhill Brook	MA36-65	From outlet of unnamed pond south of Osborne Road, New Salem to mouth at inlet Quabbin Reservoir, New Salem.	1.50	Miles			X			
Unnamed Tributary	MA36-52	Unnamed tributary to Higher Brook, headwaters north of Route 21, Ludlow to mouth at confluence with Higher Brook, Ludlow.	1.30	Miles			X			
Unnamed Tributary	MA36-57	Unnamed tributary to Foscett Mill Stream, perennial portion, east of Route 20, Brimfield to mouth at confluence with Foscett Mill Stream, Brimfield.	0.50	Miles			X			
Unnamed Tributary	MA36-59	Unnamed tributary to Fivemile River, headwaters north of Moore Road, New Braintree to mouth at confluence with Fivemile River south of Robinson Road, Oakham.	2.00	Miles			X			
Unnamed Tributary	MA36-60	Unnamed tributary to Jabish Brook, headwaters, perennial portion south of Cold Spring Road, Belchertown to mouth at confluence with Jabish Brook, Belchertown.	1.40	Miles			X			
Unnamed Tributary	MA36-70	Unnamed tributary to the Ware River, perennial portion, west of Tucker Road, West Brookfield to mouth at confluence with the Ware River, New Braintree.	0.90	Miles			X			
Unnamed Tributary	MA36-71	Unnamed tributary to the Ware River, headwaters, outlet small unnamed pond west of Dugan Road, Ware to mouth at confluence with the Ware River, Ware.	1.40	Miles			X			
Ware River	MA36-07	Thorndike Dam (NATID: MA00563), Palmer to mouth at confluence with Quaboag River (forming headwaters of Chicopee River), Palmer.	2.50	Miles	X		X	X	X	
Ware River	MA36-27	Confluence of East Branch Ware and West Branch Ware rivers, Barre to MDC intake, Barre.	4.90	Miles	X		X			
West Branch Fever Brook	MA36-34	Headwaters, perennial portion, just north (upstream) of Route 122, Petersham to mouth at inlet Quabbin Reservoir, Petersham.	3.40	Miles			X			



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					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
West Branch Swift River	MA36-31	Headwaters, outlet of small unnamed impoundment east of Cooleyville Road (in Wendell State Forest), Wendell to mouth at inlet Quabbin Reservoir, Shutesbury/New Salem.	6.30	Miles	X		X			
West Branch Ware River	MA36-02	Headwaters, outlet Brigham Pond, Hubbardston to mouth at confluence with East Branch Ware River (forming headwaters of Ware River), Barre.	4.50	Miles			X			
Winimusset Brook	MA36-69	Headwaters, west of Padre Road, New Braintree to mouth at confluence with the Ware River, New Braintree.	3.20	Miles			X			
Concord (SuAsCo)										
Allowance Brook	MA82A-37	From outlet small unnamed pond south of Hiram Road, Framingham to mouth at confluence with Hop Brook, Sudbury.	2.00	Miles			X			
Cold Harbor Brook	MA82B-18	Headwaters, outlet Rocky Pond, Boylston to mouth at confluence with Howard Brook, Northborough.	6.10	Miles	X		X	X	X	
Danforth Brook	MA82B-19	Headwaters, confluence of Mill Brook and an unnamed tributary draining from Little Pond, Bolton to mouth at inlet of Bruces Pond, Hudson.	2.40	Miles			X			
Fort Pond Brook	MA82B-13	From source in a wetland just west of Fort Pond, Littleton to mouth at inlet Warners Pond, Concord.	10.20	Miles			X			
Great Brook	MA82B-29	Headwaters, perennial portion east of Harvard Road, Bolton to mouth at inlet Delaney Pond (impoundment of Elizabeth Brook), Stow.	5.70	Miles			X			
Hop Brook	MA82B-20	Outlet Smith Pond, Northborough to mouth at confluence with the Assabet River, Northborough.	1.30	Miles			X			
Indian Brook	MA82A-23	Headwaters, outlet Icehouse Pond, Hopkinton to the inlet of Hopkinton Reservoir, Hopkinton (formerly part of 2004 segment: Indian Brook MA82A-12).	2.30	Miles			X			
Indian Brook	MA82A-24	Outlet of Hopkinton Reservoir, Ashland to mouth at confluence with the Sudbury River, Ashland (formerly part of 2004 segment: Indian Brook MA82A-12).	1.70	Miles			X			
Jackstraw Brook	MA82A-32	Headwaters, perennial portion west of Upton Road, Westborough to the most downstream crossing of Upton Road (first crossing south of Hopkinton Road), Westborough.	0.40	Miles			X			
Pine Brook	MA82A-14	Headwaters, south of Route 20, just east of the Weston/Wayland border to mouth at confluence with the Sudbury River, Wayland.	2.50	Miles			X			
Second Division Brook	MA82B-09	Headwaters, outlet small unnamed pond north of Waltham Street, Maynard to mouth at confluence with the Assabet River, Concord.	2.90	Miles			X			
Sheep Fall Brook	MA82B-25	Headwaters, perennial portion north of Ash Street, Marlborough to mouth at confluence with Flagg Brook, Marlborough.	0.50	Miles			X			



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Spencer Brook	MA82B-15	From the outlet of an unnamed pond north of Bellows Hill, Carlisle to mouth at inlet Angiers Pond, Concord.	3.80	Miles			X			
Stony Brook	MA82A-33	Headwaters, outlet Sudbury Reservoir, Southborough to mouth at inlet Framingham Reservoir #3, Framingham.	0.40	Miles	X		X	X	X	
Sudbury River	MA82A-01	Headwaters, outlet Cedar Swamp Pond, Westborough to the Fruit Street bridge, Hopkinton/Westborough.	1.90	Miles	X		X	X	X	
Unnamed Tributary	MA82A-35	Unnamed tributary to Hop Brook, headwaters south of Graham Path, Marlborough to mouth at confluence with Hop Brook, Sudbury.	1.90	Miles			X			
Unnamed Tributary	MA82A-36	Unnamed tributary to Hop Brook, headwaters outlet unnamed pond west of Vega Road, Marlborough to mouth at confluence with Hop Brook, Sudbury.	2.80	Miles			X			
Unnamed Tributary	MA82B-23	Unnamed tributary to the Assabet River; headwaters, outlet small pond south of Athens Street, Stow to mouth at confluence with Assabet River (backwater area), Stow.	1.10	Miles			X			
Unnamed Tributary	MA82B-24	Unnamed tributary to Nashoba Brook, headwaters outlet unnamed pond east of Pope Road, Acton to mouth at confluence with Nashoba Brook, Acton.	1.40	Miles			X			
Unnamed Tributary	MA82B-27	Unnamed tributary to Assabet River Reservoir, headwaters, perennial portion south of Route 30 (Nourse Street), Westborough to mouth at inlet of Assabet River Reservoir, Westborough.	0.70	Miles			X			
Unnamed Tributary	MA82B-32	Unnamed tributary to Assabet River, headwaters outlet Warner Pond, Concord to mouth at confluence with Assabet River, Concord.	0.20	Miles			X			
Whitehall Brook	MA82A-11	Headwaters, outlet Whitehall Reservoir, Hopkinton to mouth at confluence with the Sudbury River, Westborough.	3.50	Miles			X			
Connecticut										
Adams Brook	MA34-75	Headwaters confluence of Nurse and Dean brooks in small "diversion pool" for Atkins Reservoir, Shutesbury to mouth at confluence with Amethyst Brook (forming headwater Fort River), Amherst.	3.50	Miles			X			
Amethyst Brook	MA34-35	Headwaters, confluence of Buffum and Harris brooks, Pelham to mouth at confluence with Adams River (forming headwaters Fort River), Amherst.	2.10	Miles	X		X	X	X	
Bradford Brook	MA34-71	Headwaters east of Williamsburg Road, Ashfield to mouth at confluence with East Branch Mill River, Williamsburg.	4.00	Miles			X			
Brewer Brook	MA34-69	Headwaters south of Route 143 in the southwest corner of Williamsburg to mouth at confluence with Roberts Meadow Brook, Westhampton.	2.30	Miles			X			
Broad Brook	MA34-18	Headwaters, Holyoke to mouth at inlet Nashawannuck Pond, Easthampton.	9.30	Miles			X			



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Cushman Brook	MA34-34	Headwaters, outlet Atkins Reservoir, Shutesbury to mouth at inlet Factory Hollow Pond, Amherst.	2.50	Miles			X			
Day Brook	MA34-67	Headwaters southwest of Miller Hill, Williamsburg to mouth at confluence with unnamed tributary to Mill River, Northampton.	1.70	Miles			X			
Dean Brook	MA34-50	Headwaters, east of West Pelham Road (at mouth of Baker Brook), Shutesbury to mouth at confluence with Adams Brook (in small "diversion pool" for Atkins Reservoir), Shutesbury.	2.40	Miles			X			
Dry Brook	MA34-64	Headwaters, west of Huckle Hill Road, Bernardston to mouth at confluence with the Connecticut River, Gill.	8.30	Miles	X		X	X	X	
East Branch Mill River	MA34-37	Headwaters, confluence with Bradford Brook, Williamsburg to mouth at confluence with West Branch Mill River (forming headwaters Mill River), Williamsburg.	2.80	Miles			X			
Esther Brook	MA34-78	Headwaters, perennial portion, near Dickinson Hill Road crossing, Whately to mouth at confluence with Mill River, Whately.	1.30	Miles			X			
Fall River	MA34-33	Vermont/Massachusetts border, Bernardston to mouth at confluence with Connecticut River, Greenfield/Gill.	10.20	Miles	X		X	X	X	
Fourmile Brook	MA34-56	Headwaters, south of the intersection of Four Mile Brook Road and South Mountain Road, Northfield, to mouth at confluence with Connecticut River, Northfield.	3.40	Miles	X		X	X	X	
Goddard Brook	MA34-84	Headwaters east of Dry Hill Road, Montague to mouth at confluence with Sawmill River, Montague.	2.90	Miles			X			
Grass Hill Brook	MA34-70	Headwaters east of Grass Hill Road, Whately to mouth at confluence with Beaver Brook, Williamsburg.	2.20	Miles			X			
Hannegan Brook	MA34-83	Headwaters southwest of Country Hill, Montague to mouth at inlet Lake Pleasant, Montague.	1.70	Miles			X			
Harris Brook	MA34-48	Headwaters, northeast of Enfield Road, Pelham to Intake Reservoir Dam (NATID: MA01270) outlet, Pelham (excluding approximately 0.2 miles through Hawley Reservoir, Pelham).	1.20	Miles			X			
Harris Brook	MA34-94	From outlet of Intake Reservoir Dam (NATID: MA01270), Pelham to mouth at confluence with Buffum Brook (forming headwaters Amethyst Brook), Pelham.	0.30	Miles			X			
Hearthstone Brook	MA34-76	Headwaters, perennial portion, south of Poverty Mountain, Pelham to mouth at confluence with Adams Brook, Amherst.	2.30	Miles			X			
Hop Brook	MA34-61	Headwaters, west of Oasis Drive, Belchertown to mouth at confluence with Fort River, Amherst.	8.60	Miles	X			X	X	



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Joe Wright Brook	MA34-52	Headwaters south of Hemenway Trail and east of Nash Hill Road, Williamsburg to mouth at confluence with Mill River, Williamsburg.	2.90	Miles			X			
Long Plain Brook	MA34-09	Headwaters, Leveret/Sunderland town line (in Mt. Toby State Forest) to mouth at confluence with Russellville Brook at Route 116, Sunderland.	5.00	Miles	X					
Louisiana Brook	MA34-91	From outlet dam (NATID: MA00051) of Louisiana Brook Reservoir, Northfield to mouth at confluence with Pauchaug Brook, Northfield.	1.50	Miles			X			
Meekin Brook	MA34-72	Headwaters north of Route 143, Chesterfield to mouth at confluence with West Branch Mill River, Williamsburg.	2.70	Miles			X			
Mill Brook	MA34-55	Headwaters, outlet Stevens Swamp, Warwick to mouth at confluence with Connecticut River, Northfield.	7.70	Miles			X			
Millers Brook	MA34-90	Headwaters southwest of Stratton Mountain, Northfield to mouth at confluence with the Connecticut River, Northfield.	3.80	Miles			X			
Mohawk Brook	MA34-82	Headwaters, outlet Greene Swamp, Sunderland to mouth at confluence with Connecticut River, Hadley.	3.40	Miles			X			
Moose Brook	MA34-17	Headwaters, perennial portion, Southampton to mouth at confluence with Manhan River, Southampton.	2.60	Miles	X		X	X	X	
Mountain Brook	MA34-81	Headwaters west of Brushy Mountain, Leverett to mouth at confluence with Doolittle Brook, Leverett.	2.30	Miles			X			
North Branch Manhan River	MA34-54	Headwaters, perennial portion, north of Northwest Road, Westhampton to mouth at confluence with Manhan River, Easthampton/Southampton.	9.20	Miles	X		X	X	X	
Red Brook	MA34-88	Headwaters, perennial portion, east of Jourdan Road, Montgomery to mouth at confluence with Tucker Brook, Southampton.	0.80	Miles			X			
Roaring Brook	MA34-63	From the outlet of Whately Glen Reservoir (South Deerfield Water Supply Dam, NATID: MA00522), Whately to mouth at confluence with Mill River, Whately.	1.40	Miles	X		X	X	X	
Roaring Brook	MA34-79	Headwaters northwest of Cricket Hill, Conway to the outlet of Whately Glen Reservoir (South Deerfield Water Supply Dam, NATID: MA00522), Whately (excluding the approximately 0.4 miles through the Conway Reservoir (Roaring Brook Dam NATID: MA01056)).	4.00	Miles			X			
Roaring Brook	MA34-80	Headwaters outlet wetland east of Montague Road, Shutesbury to mouth at confluence with Doolittle Brook, Leverett.	4.30	Miles			X			
Roberts Meadow Brook	MA34-68	Headwaters south of Old Curtis Road, Chesterfield to mouth at inlet Roberts Meadow Reservoir, Northampton.	6.20	Miles			X			
Rogers Brook	MA34-51	Headwaters east of Oak Hill Road near the Goshen/Ashfield border to mouth at confluence with West Branch Mill River, Goshen.	2.60	Miles			X			



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Russellville Brook	MA34-62	Headwaters, Route 116, Sunderland (river name changes at bridge from Long Plain Brook SARIS# 3420350) to mouth at confluence with the Connecticut River, Hadley.	4.40	Miles	X		X	X	X	
Sawmill River	MA34-40	Headwaters, outlet Lake Wyola, Shutesbury to Dudleyville Road, Leverett (formerly part of 2006 segment: Sawmill River MA34-26).	2.00	Miles			X			
Sawmill River	MA34-41	Dudleyville Road, Leverett to mouth at confluence with Connecticut River, Montague (formerly part of 2006 segment: Sawmill River MA34-26).	11.00	Miles	X		X	X	X	
Scarboro Brook	MA34-46	Headwaters, outlet Scarboro Pond, Belchertown to mouth at confluence with Hop Brook, Belchertown.	2.30	Miles			X			
Shattuck Brook	MA34-57	Headwaters, confluence Keets and Beaver Meadow brooks, Leyden to mouth at confluence with Fall River, Bernardston.	2.40	Miles			X			
Sodom Brook	MA34-53	Headwaters, outlet small unnamed pond north of Crowley Road, Westhampton to mouth at confluence with North Branch Manhan River, Westhampton.	3.10	Miles			X			
Spaulding Brook	MA34-85	Headwaters west of Chestnut Hill, Montague to mouth at confluence with Sawmill River, Montague.	1.50	Miles			X			
Unnamed Tributary	MA34-65	Unnamed tributary to Bachelor Brook, headwaters east of Route 116, Granby to mouth at confluence with Bachelor Brook, Granby.	1.50	Miles			X			
Unnamed Tributary	MA34-73	Unnamed tributary from the south to the western bank of Hop Brook, from perennial portion south of Bay Road, Amherst to mouth at confluence with Hop Brook, Amherst.	2.00	Miles			X			
Unnamed Tributary	MA34-74	Unnamed tributary from the north to the eastern bank of Hop Brook, from just north of Route 9, Belchertown to mouth at confluence with Hop Brook, Amherst.	2.70	Miles			X			
Unnamed Tributary	MA34-77	Unnamed tributary to outlet end of "old" Northampton Reservoir, perennial portion east of Hemenway Trail, Williamsburg to mouth at confluence with outlet end of "old" Northampton Reservoir, Whately.	1.80	Miles			X			
Unnamed Tributary	MA34-87	Unnamed tributary to Sawmill River, headwaters east of Montague Road, Shutesbury to mouth at confluence with Sawmill River, Leverett.	1.90	Miles			X			
Unnamed Tributary	MA34-93	Unnamed tributary to Hawley Reservoir, headwaters north of Tower Road in Cadwell Memorial Forest, Pelham to mouth at inlet Hawley Reservoir, Pelham.	1.00	Miles			X			
Upper Highland Lake	MA34093	Goshen.	51.00	Acres				X	X	
West Branch Mill River	MA34-38	Headwaters outlet Lower Highland Lake spillway, East Street, Goshen to the confluence of Meekin Brook, Williamsburg.	5.90	Miles			X			



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Waterbody	AU ID	Description	Size	Units	Uses Attained					
					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
West Brook	MA34-58	Headwaters, outlet Northampton Reservoir (Old Northampton Reservoir), Whately to mouth at confluence with Mill River, Hatfield.	4.00	Miles			X			
West Wait Brook	MA34-89	Headwaters, perennial portion, west of Old Vernon Road, Northfield to the confluence of East Wait Brook, Northfield.	1.70	Miles			X			
White Brook	MA34-14	Headwaters, perennial portion, Easthampton to mouth at inlet Nashawannuck Pond, Easthampton.	1.80	Miles			X			
Williams Brook	MA34-86	Headwaters, perennial portion, south of Chestnut Hill Loop, Montague to mouth at confluence with Sawmill River, Leverett.	1.50	Miles			X			
Deerfield										
Albee Brook	MA33-33	Headwaters, north of Dodge Corner Road, Hawley to confluence with Deerfield River, Charlemont.	1.00	Miles			X			
Allen Brook	MA33-34	Headwaters, east of the Shelburne Colrain Road and Route 2 intersection, Shelburne to confluence with Green River, Greenfield.	3.60	Miles			X			
Avery Brook	MA33-35	Headwaters, perennial portion south of Colrain Brook Road, Heath to confluence with Deerfield River, Charlemont.	3.70	Miles			X			
Basin Brook	MA33-36	Headwaters, Kenneth M. Dubuque Memorial State Forest, Hawley to confluence with King Brook, Hawley.	2.20	Miles			X			
Black Brook	MA33-37	Headwaters, west of Chapel Road, Savoy to confluence with Cold River, Savoy.	3.30	Miles			X			
Borden Brook	MA33-38	Vermont-Massachusetts stateline, Colrain to confluence with Green River, Colrain.	0.60	Miles			X			
Bozrah Brook	MA33-13	Headwaters, located west of East Hawley Road, Hawley (drains wetland) to confluence with Deerfield River, Charlemont.	3.00	Miles	X		X	X	X	
Brandy Brook	MA33-117	Headwaters east of North County Road, Leyden to confluence with Glen Brook, Leyden.	1.60	Miles			X			
Brown Brook	MA33-39	Headwaters, perennial portion east of Scott Road, Savoy to confluence with Chickley River, Savoy.	0.40	Miles			X			
Burrington Brook	MA33-40	Headwaters, east of Sadoga Road, Heath to confluence with West Branch Brook (forming headwaters West Branch North River), Heath.	2.00	Miles			X			
Burton Brook	MA33-41	Vermont-Massachusetts stateline, Rowe to confluence with West Branch Brook, Heath.	1.30	Miles			X			
Cary Brook	MA33-42	Perennial portion north of East Catamount Hill Road, Colrain to confluence with West Branch North River, Colrain.	0.50	Miles			X			
Cascade Brook	MA33-43	Headwaters, perennial portion southeast of Moore Road, Florida to confluence with Deerfield River, Florida.	1.80	Miles			X			



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Waterbody	AU ID	Description	Size	Units	Uses Attained					
					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Chapel Brook	MA33-44	Outlet of unnamed pond, Ashfield to confluence with Poland Brook, Conway.	3.40	Miles	X		X	X	X	
Chickley River	MA33-11	Headwaters Savoy Mountain State Forest, Savoy to confluence with Deerfield River, Charlemont.	11.10	Miles	X		X	X	X	
Clark Brook	MA33-16	Headwaters, near Moonshine Road (Howes Road)/East Buckland Road, Buckland to confluence with Clesson Brook, Buckland.	3.80	Miles	X		X	X	X	
Clesson Brook	MA33-15	Outlet of unnamed pond south of Forget Road, Hawley through Cox Pond to confluence with Deerfield River, Buckland.	10.30	Miles	X		X	X	X	
Cold River	MA33-05	Source in Florida to confluence with Deerfield River, Charlemont.	13.70	Miles	X		X	X	X	
Cooley Brook	MA33-45	Headwaters, north of La Belle Road, Hawley to confluence with Clesson Brook, Buckland.	1.50	Miles			X			
Creamery Brook	MA33-46	Headwaters, perennial portion west of Steady Lane Road, Ashfield to confluence with South River, Ashfield.	2.40	Miles	X		X	X	X	
Davenport Brook	MA33-111	Headwaters outlet Papoose Lake, Heath to confluence with Kinsman Brook forming headwaters Taylor Brook, Heath.	0.90	Miles			X			
Deerfield River	MA33-02	Confluence with Cold River, Charlemont to confluence with North River, Charlemont/Shelburne.	11.40	Miles	X		X	X	X	
Dickenson Brook	MA33-120	Headwaters west of Sumner Stetson Road, Heath to confluence with West Branch Brook, Heath.	0.70	Miles			X			
Drakes Brook	MA33-23	Headwaters, (perennial portion) west of North Warger Road, Ashfield to confluence with Bear River, Conway.	2.30	Miles			X			
Dunbar Brook	MA33-48	Vermont-Massachusetts stateline, Monroe to confluence with Deerfield River, Monroe.	5.60	Miles			X			
East Glen Brook	MA33-49	Headwaters, perennial portion north of East Glen Road, Leyden to inlet of Upper Greenfield Reservoir (Glen Brook Upper Reservoir), Leyden.	1.90	Miles			X			
East Oxbow Brook	MA33-72	Headwaters, perennial portion east of Deer Run Lane, Charlemont to confluence with Deerfield River, Charlemont.	1.40	Miles			X			
Fife Brook	MA33-50	Headwaters, perennial portion southwest of Spruce Mountain in the Monroe State Forest, Monroe to confluence with Deerfield River, Florida.	2.60	Miles			X			
Foundry Brook	MA33-25	Headwaters north of Calvin Coombs Road, Colrain to confluence with East Branch North River, Colrain.	2.80	Miles	X		X	X	X	
Fox Brook	MA33-51	From the outlet of Fox Brook Upper Reservoir, Colrain to confluence with North River, Colrain.	0.80	Miles			X			
Fuller Brook	MA33-118	Perennial portion in Dubuque State Forest, Hawley to confluence with Chickley River, Hawley.	0.90	Miles			X			



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					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Glen Brook	MA33-52	Headwaters, east of Brattleboro Road, Leyden to inlet of Upper Greenfield Reservoir (Glen Brook Upper Reservoir), Leyden.	3.50	Miles			X			
Glen Brook	MA33-96	Outlet of Upper Greenfield Reservoir, Leyden to confluence with Green River, Greenfield.	3.20	Miles			X			
Granger Brook	MA33-53	Headwaters, west of Bliss Road, Florida to confluence with Dunbar Brook, Monroe.	1.20	Miles			X			
Great Brook	MA33-54	Headwaters, perennial portion west at Zerah Fiske Road, Shelburne to confluence with Hawkes Brook, Shelburne.	1.20	Miles			X			
Green River	MA33-28	Vermont line, Colrain to water supply dam north of Eunice Williams Drive (Pumping Station Dam, National ID MA02291), Greenfield (formerly part of 2002 segment: Green River MA33-09).	8.40	Miles	X		X	X	X	
Green River	MA33-29	From water supply dam north of Eunice Williams Drive (Pumping Station Dam, National ID MA02291), Greenfield to the Swimming Pool #2 Dam (National Dam ID MA02321) northwest of Nashs Mill Road, Greenfield (formerly part of 2002 segment: Green River MA33-09).	4.60	Miles			X			
Green River	MA33-55	Headwaters, perennial portion in Florida State Forest west of Blackstone Road, Florida to confluence with Cold River, Florida.	1.30	Miles			X			
Gulf Brook	MA33-56	Outlet of Burnett Pond, Savoy to confluence with Cold River, Savoy.	3.50	Miles			X			
Haley Brook	MA33-57	Headwaters north of Main Street, Monroe to confluence with Dunbar Brook, Monroe.	1.50	Miles			X			
Hartwell Brook	MA33-58	Headwaters, south of South Heath Road, Charlemont to confluence with Deerfield River, Charlemont.	2.10	Miles			X			
Hawkes Brook	MA33-112	Headwaters east of Zerah Fiske Road, Shelburne to confluence with Dragon Brook, Shelburne.	1.20	Miles			X			
Heath Brook	MA33-59	Headwaters, south of West Main Street, Heath to confluence with Mill Brook, Heath.	1.00	Miles			X			
Hibbard Brook	MA33-60	Headwaters, north of West Leyden Road, Leyden to confluence with Green River, Leyden.	1.50	Miles			X			
Horsefords Brook	MA33-62	Headwaters, west of Bannis Road, Savoy to confluence with Chickley River, Savoy.	1.90	Miles			X			
Johnny Bean Brook	MA33-63	Headwaters, Poland Brook State Wildlife Management Area, Conway to confluence with South River, Conway.	1.70	Miles			X			
Katley Brook	MA33-99	Headwaters, east of Katley Hill, Leyden to confluence with Green River, Leyden.	1.30	Miles			X			
King Brook	MA33-64	Headwaters, outlet Hallockville Pond, Hawley to confluence with Chickley River, Hawley.	2.10	Miles			X			



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					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Legate Hill Brook	MA33-65	Headwaters, perennial portion north of Blueberry Peak, Charlemont to confluence with Deerfield River, Charlemont.	3.40	Miles			X			
Manning Brook	MA33-66	Headwaters, north of South County Road, Florida to confluence with Cold River, Florida.	1.40	Miles			X			
Maxwell Brook	MA33-67	Headwaters, located north of Tatro Road, Rowe to confluence with Mill Brook, Charlemont.	3.20	Miles			X			
Mccard Brook	MA33-68	Headwaters, east of Oak Hill Road, Leyden to confluence with Mill Brook, Greenfield.	2.10	Miles			X			
Meadow Brook	MA33-130	Headwaters, outlet McLeod Pond, Colrain to mouth at confluence with North River, Colrain.	1.20	Miles			X			
Mill Brook	MA33-14	Headwaters, originating north of Rowe Road, Heath to confluence with the Deerfield River, Charlemont.	5.70	Miles	X		X	X	X	
Mill Brook	MA33-69	Headwaters, outlet Beaver Pond, Hawley to confluence with Chickley River, Hawley.	4.10	Miles			X			
North Pond	MA33014	Florida.	19.00	Acres				X	X	
North River	MA33-06	From confluence of East and West branches of the North River, Colrain to confluence with Deerfield River, Shelburne/Charlemont. (Segment changed 1997 - East Branch no longer included in length) (HQW applies upstream of Barnhardt discharge (NPDES#MA0003697)).	3.30	Miles	X		X	X	X	
Nye Brook	MA33-71	Headwaters, perennial portion north of Guinea Gulf (Conway State Forest), Conway to confluence with Poland Brook, Conway.	0.70	Miles			X			
Parsonage Brook	MA33-123	Headwaters north of Main Road, Monroe to confluence with Dunbar Brook, Monroe.	1.50	Miles			X			
Pelham Brook	MA33-12	Headwaters outlet Pelham Lake, Rowe to confluence with Deerfield River, Charlemont.	4.80	Miles	X		X	X	X	
Phelps Brook	MA33-73	Perennial portion, north of Main Road, Monroe to inlet of Phelps Brook Reservoir, Monroe.	1.20	Miles			X			
Poland Brook	MA33-74	Confluence with Chapel Brook, Conway to confluence with South River, Conway.	2.60	Miles	X		X	X	X	
Potash Brook	MA33-75	Headwaters, Cranberry Swamp, Hawley (drains wetland) to confluence with Mill Brook, Hawley.	1.40	Miles			X			
Pumpkin Hollow Brook	MA33-32	Headwaters north of Conway State Forest and south of Old Cricket Hill Road, Conway to confluence with South River, Conway.	2.30	Miles			X	X	X	
Punch Brook	MA33-100	Headwaters, perennial portion east of Smead Road, Shelburne to confluence with Green River, Greenfield.	2.10	Miles			X			



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					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Rice Brook	MA33-76	Headwaters, north of Hazelton Road, Rowe to confluence with Pelham Brook, Rowe.	1.20	Miles			X			
Roberts Brook	MA33-77	Headwaters, east of Hosmer Road, Heath to confluence with West Branch North River, Colrain.	1.00	Miles			X			
Ross Brook	MA33-78	Headwaters, south of Tannery Road, Savoy to confluence with Tannery Brook, Savoy.	2.00	Miles			X			
Ruddock Brook	MA33-79	Headwaters, west of Dodge Corner Road, Hawley to confluence with Clesson Brook, Buckland.	1.10	Miles			X			
Sanders Brook	MA33-80	Vermont/Massachusetts border, Heath to confluence with West Branch North River, Colrain.	2.80	Miles			X			
Schneck Brook	MA33-113	Headwaters, north of Wilder Hill Road, Conway to confluence with the Deerfield River, Conway.	2.00	Miles			X			
Sheldon Brook	MA33-81	Headwaters, south of Old Albany Road, Shelburne to confluence with Deerfield River, Deerfield/Greenfield.	1.40	Miles			X			
Shingle Brook	MA33-22	Headwaters north of Guy Manners Road, Shelburne to confluence with the Deerfield River, Deerfield.	2.80	Miles	X		X	X	X	
Sids Brook	MA33-82	Headwaters, perennial portion north of Baptist Corner Road, Ashfield to confluence with Drakes Brook, Conway.	1.70	Miles			X			
Sluice Brook	MA33-83	Headwaters, north of Tower Road, Shelburne to confluence with Deerfield River, Shelburne.	3.30	Miles			X			
Smead Brook	MA33-84	Headwaters, east of Old Albany Road, Greenfield to confluence with Wheeler Brook, Greenfield.	1.70	Miles			X			
Smith Brook	MA33-26	Headwaters, outlet Upper Reservoir, Ashfield to confluence with Clesson Brook, Buckland.	2.70	Miles	X		X	X	X	
South Pond	MA33019	Savoy.	29.00	Acres				X	X	
Spur Brook	MA33-106	Headwaters, outlet small pond just west at intersection of Christian Hill Road and Thompson Road, Colrain to confluence with East Branch North River, Colrain.	2.00	Miles			X			
Stafford Brook	MA33-98	Headwaters, perennial portion south of East Colrain Road, Colrain to confluence with Green River, Colrain.	1.40	Miles			X			
Staples Brook	MA33-121	Headwaters east of Spruce Hill, North Adams to confluence Tower Brook, Florida.	1.40	Miles			X			
Steele Brook	MA33-85	Headwaters, perennial portion north of Tunnel Road, Rowe to confluence with Pelham Brook, Rowe.	1.70	Miles			X			
Stewart Brook	MA33-132	Perennial portion north of Wilson Graves Road, Shelburne to mouth at confluence with Hinsdale Brook, Shelburne.	1.00	Miles			X			



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Tannery Brook	MA33-86	Outlet of Tannery Pond, Savoy to confluence with Gulf Brook, Savoy.	0.70	Miles			X			
Taylor Brook	MA33-31	From the confluence of Kinsman Brook and Davenport Brook, Heath to confluence with West Branch North River, Colrain.	2.60	Miles	X		X	X	X	
Tilton Brook	MA33-119	Headwaters in Savoy Mountain State Forest, west of Bannis Road, Savoy to confluence with Chickley River, Savoy.	2.00	Miles			X			
Tissdell Brook	MA33-24	Headwaters perennial portion east of Christian Hill Cemetery, Colrain to confluence with West Branch North River, Colrain.	1.70	Miles	X		X	X	X	
Tower Brook	MA33-87	Headwaters, west of Central Shaft Road, Florida (drains wetland) to confluence with Cold River, Florida.	1.90	Miles			X			
Trout Brook	MA33-88	Headwaters, perennial portion west of Hawks Mountain, Charlemont/Hawley to confluence with Cold River, Charlemont.	0.60	Miles			X			
Tuttle Brook	MA33-129	Headwaters east of Leshures Road, Rowe to mouth at confluence with Potter Brook, Rowe.	2.00	Miles			X			
Unnamed Tributary	MA33-103	Unnamed tributary to Hinsdale Brook, perennial portion east of Little Mohawk Road, Shelburne to confluence with Hinsdale Brook, Shelburne.	1.90	Miles			X			
Unnamed Tributary	MA33-104	Unnamed tributary to an unnamed tributary to Hinsdale Brook from Shearer Pond Dam (National Dam ID MA01531), Colrain to confluence with an unnamed tributary to Hinsdale Brook, Shelburne.	0.90	Miles			X			
Unnamed Tributary	MA33-105	Unnamed tributary to Glen Brook, headwaters north of Oak Hill Road, Leyden to confluence Glen Brook, Greenfield.	1.90	Miles			X			
Unnamed Tributary	MA33-107	Unnamed tributary to the East Branch North River, headwaters south of Fairbanks Road, Colrain to the confluence of the East Branch North River, Colrain.	1.70	Miles			X			
Unnamed Tributary	MA33-108	Unnamed tributary to East Branch North River, headwaters outlet Mt. Brook Reservoir, Colrain to confluence with East Branch North River, Colrain.	1.40	Miles			X			
Unnamed Tributary	MA33-109	Unnamed tributary to West Branch North River, headwaters west of Wilson Hill Road, Colrain to confluence with West Branch North River, Colrain.	1.40	Miles			X			
Unnamed Tributary	MA33-110	Unnamed tributary to Taylor Brook, headwaters, Catamount State Forest, Colrain to confluence Taylor Brook, Colrain.	1.50	Miles			X			
Unnamed Tributary	MA33-114	Headwaters east of Pine Hill Road, Conway to confluence with South River, Conway.	1.00	Miles			X			
Unnamed Tributary	MA33-115	Unnamed tributary to Chapel Brook, headwaters west of Bird Hill Road, Ashfield to confluence with Chapel Brook, Ashfield.	1.50	Miles			X			
Unnamed Tributary	MA33-116	Unnamed tributary to Clesson Brook, headwaters north of Avery Road, Buckland to confluence with Clesson Brook, Buckland.	1.80	Miles			X			



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Unnamed Tributary	MA33-133	Unnamed tributary to the Deerfield River from headwaters, outlet Goodnow Road Pond, Buckland to mouth at confluence with the Deerfield River, Buckland.	1.50	Miles			X			
Unnamed Tributary	MA33-134	Unnamed tributary to East Branch North River from headwaters east of Franklin Hill Road and southwest at Franklin Hill, Colrain to mouth at confluence with East Branch North River, Colrain.	0.70	Miles			X			
Unnamed Tributary	MA33-61	Unnamed tributary to Clark Brook locally known as "Hog Hollow Brook", headwaters north of Bray Road, Buckland to confluence with Clark Brook, Buckland.	1.10	Miles			X			
Vincent Brook	MA33-89	Headwaters, perennial portion east of Stetson Brothers Road, Colrain to confluence with West Branch North River, Colrain.	1.00	Miles			X			
West Branch Brook	MA33-90	Headwaters, Vermont-Massachusetts stateline, Heath to confluence with Burrington Brook (forming headwaters West Branch North River), Heath.	5.40	Miles			X			
West Branch North River	MA33-27	Headwaters, confluence of West Branch Brook and Burrington Brook, Heath to confluence with East Branch North River, forming headwaters North River, Colrain.	7.20	Miles	X		X	X	X	
Wheeler Brook	MA33-95	Headwaters, south of Old Greenfield Road, Shelburne to confluence with Green River, Greenfield.	2.50	Miles	X		X	X	X	
Whitcomb Brook	MA33-91	Headwaters, perennial portion east of Whitcomb Hill Road, Florida to confluence with Deerfield River, Florida.	0.60	Miles			X			
White Brook	MA33-122	Headwaters east of Olson Road, Florida to confluence with the Cold River, Florida.	1.60	Miles			X			
Wilder Brook	MA33-92	Headwaters, east of Flagg Hill Road, Heath to confluence with Deerfield River, Charlemont.	2.90	Miles			X			
Willis Brook	MA33-93	Headwaters, perennial portion south of South Road, Heath to confluence with Hartwell Brook, Charlemont.	1.60	Miles			X			
Workman Brook	MA33-94	Headwaters, perennial portion west of East Colrain Road, Colrain (drains wetland) to confluence with Green River, Colrain.	1.40	Miles			X			
Farmington										
Babcock Brook	MA31-32	Headwaters west of Amos Case Road, Tolland to mouth at confluence with Hall Pond Brook (forming headwaters Hubbard Brook), Tolland.	3.30	Miles			X			
Buck River	MA31-39	Outlet Abbey Lake, Sandisfield to mouth at confluence with Clam River, Sandisfield (formerly part of segment MA31-12).	4.10	Miles	X		X	X	X	
Clam River	MA31-03	Headwaters, perennial portion, outlet small unnamed pond, Otis to mouth at confluence with West Branch Farmington River, Sandisfield (excluding the 0.8 miles thru the Clam Lake Dam (NATID: MA01052) impoundment).	7.90	Miles	X		X	X	X	



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Cone Brook	MA31-08	Headwaters, drainage from Angerman Swamp in Beartown State Forest, Otis to mouth at inlet Hayden Pond, Otis.	2.10	Miles			X			
Dimmock Brook	MA31-10	Outlet of Dimmock Brook Pond, Otis to mouth at confluence with West Branch Farmington River, Otis.	1.00	Miles	X		X	X	X	
East Branch Salmon Brook	MA31-40	Headwaters, perennial portion, Granville to MA/CT border, Granville.	0.10	Miles			X			
Fall River	MA31-02	Headwaters, outlet Larkum Pond, Otis to mouth at confluence with West Branch Farmington River, Otis.	0.80	Miles	X		X	X	X	
Halfway Brook	MA31-31	Headwaters, outlet of wetland in Granville State Forest, Tolland to mouth at confluence with Hubbard Brook, Granville.	1.80	Miles			X			
Hubbard Brook	MA31-16	Headwaters, confluence Babcock Brook and Hall Pond Brook, Tolland to MA/CT border Granville.	4.00	Miles	X		X	X	X	
Miner Brook	MA31-28	Headwaters, outlet wetland east of North Beech Plain Road, Sandisfield to mouth at confluence with West Branch Farmington River, Sandisfield.	1.50	Miles			X			
Moody Brook	MA31-23	Headwaters, outlet Trout Pond, Tolland to mouth at confluence with West Branch Farmington River, Sandisfield.	1.80	Miles			X			
North Brook	MA31-41	Headwaters, outlet unnamed pond north of Roberts Road, Sandisfield to MA/CT border, Sandisfield.	0.90	Miles			X			
Pond Brook	MA31-30	Headwaters, outlet Parsons Pond, Granville to mouth at confluence with Hubbard Brook, Granville.	4.60	Miles			X			
Richardson Brook	MA31-24	Headwaters, north of New Boston Road (Route 57), Tolland to mouth at confluence with Moody Brook, Tolland.	1.30	Miles			X			
Riiska Brook	MA31-17	Headwaters, perennial portion, west of New Hartford Road, Sandisfield to mouth at confluence with Sandy Brook, Sandisfield.	2.10	Miles			X			
Sandy Brook	MA31-14	Headwaters, outlet York Lake, New Marlborough to MA/CT border Sandisfield.	4.90	Miles	X		X	X	X	
Shales Brook	MA31-04	Source north of Tyringham Road, Becket to mouth at inlet Shaw Pond, Becket.	1.20	Miles	X		X	X	X	
Silver Brook	MA31-13	Headwaters, confluence of North Branch and South Branch Silver Brook, Sandisfield to mouth at confluence with Clam River, Sandisfield.	1.00	Miles	X		X	X	X	
Slocum Brook	MA31-19	Headwaters, outlet small unnamed wetland pond south of Hartland Road, Tolland to MA/CT border, Tolland.	3.30	Miles			X			
South Branch Silver Brook	MA31-26	Headwaters, perennial portion north of Fox Road, Sandisfield to mouth at confluence with North Branch Silver Brook (forming headwaters Silver Brook), Sandisfield.	1.30	Miles			X			



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					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Taylor Brook	MA31-20	Headwaters, west of Clubhouse Road, Tolland to mouth at confluence with Slocum Brook, Tolland.	3.30	Miles			X			
Thorp Brook	MA31-22	Headwaters, east of Dodds Mountain, south of Sears Road, Sandisfield to mouth at confluence with West Branch Farmington River, Sandisfield.	2.70	Miles			X			
Unnamed Tributary	MA31-07	Source, outlet Shaw Pond, Becket/Otis to mouth at inlet Hayden Pond, Otis.	0.90	Miles	X			X	X	
Unnamed Tributary	MA31-09	Unnamed tributary to West Branch Farmington River, source north of Route 23 and east of Harrington Road, Otis to mouth at confluence with West Branch Farmington River, Otis.	2.00	Miles	X		X	X	X	
Valley Brook	MA31-15	Source, northwest of Holden Hill, Granville to MA/CT border, Granville.	5.90	Miles	X		X	X	X	
French										
Mill Brook	MA42-10	Headwaters, outlet Webster Lake, Webster to mouth at confluence with French River, Webster.	1.20	Miles			X			
Unnamed Tributary	MA42-01	Unnamed tributary to Town Meadow Brook, outlet Sargent Pond, Leicester to inlet Dutton Pond, Leicester.	0.50	Miles			X			
Housatonic										
Alford Brook	MA21-44	Headwaters, outlet small unnamed pond north of Wilson Road, West Stockbridge to mouth at confluence with Seekonk Brook, Alford.	6.30	Miles			X			
Anthony Brook	MA21-10	From Anthony Pond Reservoir intake, Dalton to mouth at confluence with Wahconah Falls Brook, Dalton.	1.60	Miles			X			
Baldwin Brook	MA21-48	From the NY/MA border in West Stockbridge to mouth at confluence with Flat Brook, West Stockbridge.	1.90	Miles			X			
Barton Brook	MA21-60	Headwaters, south of Grange Hall Road, Dalton to mouth at confluence with East Branch Housatonic River, Pittsfield.	3.20	Miles			X			
Bear Rock Stream	MA21-43	Headwaters, outlet Plantain Pond, Mount Washington to mouth at confluence with Schenob Brook, Sheffield.	2.00	Miles			X			
Beartown Brook	MA21-74	Headwaters, confluence of West and East brooks (east of Beartown Mountain Road), Lee to mouth at confluence with Housatonic River, Lee.	0.80	Miles			X			
Benedict Pond	MA21011	Great Barrington/Monterey.	37.00	Acres				X	X	
Brattle Brook	MA21-59	Headwaters, northwest of Tully Mountain, Dalton to mouth at confluence with East Branch Housatonic River, Pittsfield.	2.90	Miles			X			
Churchill Brook	MA21-34	Headwaters, perennial portion in the Pittsfield State Forest, Hancock (north of Honwee Mountain, Lanesborough) to mouth at inlet Onota Lake, Pittsfield.	2.80	Miles			X			
Cleveland Brook	MA21-08	Headwaters, outlet Cleveland Brook Reservoir, Hinsdale to mouth at confluence with East Branch Housatonic River, Dalton.	1.90	Miles			X			



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Waterbody	AU ID	Description	Size	Units	Uses Attained					
					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Commons Brook	MA21-52	Headwaters, south of Upper Reservoir, Lee to mouth at confluence with Coddington Brook, Lee.	0.90	Miles			X			
Cone Brook	MA21-76	Headwaters, confluence of Sleepy Hollow and Fairfield brooks, Richmond to mouth at inlet Shaker Mill Pond, West Stockbridge.	4.60	Miles			X			
Crystal Brook	MA21-51	Headwaters, east of Main Road, Tyringham to mouth at confluence with Hop Brook, Tyringham.	0.60	Miles			X			
Daniels Brook	MA21-65	Headwaters, perennial portion, west of Potter Mountain Road, Lanesborough to mouth at inlet Onota Lake, Pittsfield.	3.10	Miles			X			
Dry Brook	MA21-41	Headwaters, perennial portion, west of Route 41 (South Undermountain Road), Sheffield to mouth at confluence with Schenob Brook, Sheffield.	2.70	Miles			X			
East Branch Housatonic River	MA21-01	Headwaters, outlet Muddy Pond, Washington to the outlet of Center Pond, Dalton (through former 2006 segment: Center Pond MA21016).	11.20	Miles	X		X	X	X	
Fenton Brook	MA21-35	Headwaters south of Jug End Road, Egremont (west of Mt. Bushnell, Sheffield), to mouth at confluence with Karner Brook, Egremont.	2.40	Miles			X			
Furnace Brook	MA21-21	Headwaters, perennial portion, south of Route 295 (Canaan Road), Richmond to mouth at inlet Mud Ponds, West Stockbridge.	3.70	Miles			X			
Goose Pond Brook	MA21-07	Headwaters, wetland north of George Cannan Road, Tyringham to mouth at confluence with the Housatonic River, Lee.	3.20	Miles	X		X	X	X	
Green River	MA21-23	MA/NY border, Alford, southwest of Route 71, to mouth at confluence with the Housatonic River, Great Barrington.	10.30	Miles	X		X	X	X	
Hathaway Brook	MA21-58	Headwaters, east of Washington Mountain Road, Washington to mouth at confluence with Sackett Brook, Dalton.	2.20	Miles			X			
Hollow Brook	MA21-67	Headwaters, perennial portion, west of Silver Street, Lanesborough to mouth at confluence with Secum Brook, Lanesborough.	1.50	Miles			X			
Hop Brook	MA21-28	Headwaters, outlet Curtin Pond, Otis to mouth at confluence with the Housatonic River, Lee.	12.00	Miles	X		X	X	X	
Karner Brook	MA21-38	Headwaters, perennial portion east of East Street, Mount Washington to the Karner Brook Reservoir intake, Egremont (formerly part of 2014 segment: Karner Brook MA21-16).	2.30	Miles			X			
Larrywaug Brook	MA21-29	Headwaters, outlet Stockbridge Bowl, Stockbridge to mouth at confluence with Housatonic River, Stockbridge.	2.90	Miles	X		X	X	X	
Lenox Mountain Brook	MA21-47	Outlet Lenox Reservoir, Lenox to mouth at confluence with Cone Brook, Richmond.	2.10	Miles			X			
Lulu Brook	MA21-64	Headwaters, perennial portion, northeast of Berry Pond Circuit Road, Hancock to mouth at confluence with Parker Brook, Pittsfield.	2.70	Miles			X			



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Waterbody	AU ID	Description	Size	Units	Uses Attained					
					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Mill Brook	MA21-55	Headwaters, outlet Mill Brook Reservoir, Washington to mouth at confluence with Housatonic River, Lenox.	1.80	Miles			X			
Mohawk Brook	MA21-78	Headwaters, outlet Mohawk Lake, Stockbridge to mouth at confluence with Housatonic River, Stockbridge.	1.40	Miles			X			
Mount Lebanon Brook	MA21-70	Headwaters, north of Lebanon Mountain Road (Route 20), Hancock to mouth at inlet Richmond Pond, Richmond.	3.00	Miles			X			
Parker Brook	MA21-63	Headwaters, outlet Tilden Swamp, Hancock to mouth at inlet Onota Lake, Pittsfield.	3.20	Miles			X			
Race Brook	MA21-42	Headwaters, east of the Appalachian National Scenic Trail in the Mount Washington State Forest, Mount Washington to mouth at confluence with Dry Brook, Sheffield.	1.60	Miles			X			
Rawson Brook	MA21-37	Headwaters, north of Cronk Road, Monterey to mouth at confluence with Konkapot River, Monterey.	5.90	Miles	X		X	X	X	
Roaring Brook	MA21-56	From Pittsfield water supply aqueduct diversion to Farnham Reservoir, Washington to mouth at confluence with Mill Brook, Lenox.	2.30	Miles			X			
Sackett Brook	MA21-81	Outlet Upper Sackett Reservoir, Hinsdale to mouth at confluence with Housatonic River, Pittsfield.	5.00	Miles			X			
Schenob Brook	MA21-79	From the CN/MA border, Sheffield to mouth at confluence with Hubbard Brook, Sheffield.	10.00	Miles			X			
Scribner Brook	MA21-45	From NY/MA border in Alford to mouth at confluence with Alford Brook, Alford.	0.90	Miles			X			
Seace Brook	MA21-71	Headwaters, perennial portion, north of East Slope Road, Richmond to mouth at confluence with Mount Lebanon Brook, Hancock.	1.50	Miles			X			
Shaker Brook	MA21-69	Headwaters, north of Route 20, Hancock to mouth at confluence with Southwest Branch Housatonic River, Pittsfield.	2.20	Miles			X			
Smith Brook	MA21-72	Headwaters, perennial portion north of Brickhouse Mountain Road, Pittsfield to mouth at confluence with Southwest Branch Housatonic River, Pittsfield.	2.80	Miles			X			
Stony Brook	MA21-49	Headwaters, outlet Benedict Pond, Great Barrington to mouth at confluence with Konkapot Brook, at Berle Pond Dam (NAT ID# MA01046), Great Barrington.	2.90	Miles			X			
Swann Brook	MA21-40	Headwaters, east of Mount Wilcox Road, in the Beartown State Forest, Monterey to mouth at confluence with the Konkapot River, Monterey.	3.20	Miles			X			
Sykes Brook	MA21-57	Headwaters, perennial portion north of Sykes Mountain, Pittsfield to mouth at confluence with Housatonic River, Pittsfield.	1.60	Miles			X			



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					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Town Brook	MA21-36	Headwaters, perennial portion, Lanesborough to mouth at inlet Pontoosuc Lake, Lanesborough.	7.90	Miles	X		X	X	X	
Tyler Brook	MA21-32	Headwaters, north of Monahan Road, Windsor to mouth at confluence with Windsor Brook, Windsor.	2.50	Miles			X			
Umpachene River	MA21-75	Headwaters, perennial portion west of Idle Hour Road, New Marlborough to mouth at confluence with Konkapot River, New Marlborough.	7.80	Miles			X			
Unnamed Tributary	MA21-24	Headwaters, outlet Mill Pond, Egremont to mouth at confluence with Hubbard Brook, Egremont.	1.50	Miles			X			
Unnamed Tributary	MA21-46	Unnamed tributary to Housatonic River, headwaters (perennial portion) northwest of the Butternut Ski Area (south of Route 23), Great Barrington to mouth at confluence with Housatonic River, Great Barrington.	2.60	Miles			X			
Unnamed Tributary	MA21-54	Unnamed tributary to Housatonic River, from outlet of Felton Lake (north of Felton Pond Road), Washington to mouth at confluence with Housatonic River, Lee.	1.00	Miles			X			
Unnamed Tributary	MA21-62	Unnamed tributary to Plunkett Reservoir, headwaters, outlet Belmont Reservoir, Hinsdale to mouth at inlet Plunkett Reservoir, Hinsdale.	0.90	Miles			X			
Unnamed Tributary	MA21-68	Unnamed tributary to Town Brook, headwaters, perennial portion north of Brodie Mountain Ski Area, New Ashford to mouth at confluence with Town Brook, Lanesborough.	1.60	Miles			X			
Wahconah Falls Brook	MA21-11	Headwaters, outlet Windsor Reservoir, Windsor to mouth at confluence with East Branch Housatonic River, Dalton.	3.40	Miles	X		X	X	X	
Washington Mountain Brook	MA21-53	From outlet of impoundment at Schoolhouse Lake Dam (NAT ID# MA02588), Washington to mouth at confluence with Housatonic River, Lee.	3.40	Miles			X			
Welch Brook	MA21-33	Headwaters, northeast of Tully Mountain, Hinsdale to mouth at confluence with unnamed tributary to Plunkett Reservoir, Hinsdale.	1.70	Miles			X			
West Brook	MA21-73	Headwaters in Beartown State Forest, Great Barrington to mouth at confluence with East Brook (creating headwaters of Beartown Brook), Lee.	3.30	Miles			X			
Weston Brook	MA21-61	Headwaters, west of Route 9, Windsor to mouth at confluence with Wahconah Falls Brook, Dalton.	1.80	Miles			X			
Yokun Brook	MA21-77	Headwaters, north of Reservoir Road, Lenox to mouth at confluence with Housatonic River, Lenox.	6.60	Miles			X			
Hudson: Bashbish										
Bashbish Brook	MA13-01	Headwaters at confluence with Ashley Hill Brook, west of West Street, Mount Washington to Massachusetts/New York border, Mount Washington.	2.10	Miles			X			



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Hudson: Hoosic										
Bassett Brook	MA11-17	Headwaters, perennial portion, southeast slope of Saddle Ball Mountain, Adams to mouth at inlet Bassett Reservoir, Cheshire.	1.90	Miles			X			
Broad Brook	MA11-23	From Vermont state line, Williamstown to mouth at confluence with the Hoosic River, Williamstown (includes former 1998 segment: Broad Brook MA11-07).	2.20	Miles	X		X	X	X	
Buxton Brook	MA11-25	Headwaters, perennial portion, west of Petersburg Road, Williamstown to mouth at confluence with Hemlock Brook, Williamstown.	1.30	Miles	X		X	X	X	
Dry Brook	MA11-13	Headwaters, west of Jackson Road (in Savoy Wildlife Management Area), Savoy to mouth at confluence with Hoosic River, Adams.	6.70	Miles			X			
East Branch Green River	MA11-21	Headwaters, perennial portion, northeast of Sugarloaf Mountain, New Ashford to mouth at confluence with Green River, New Ashford.	2.20	Miles	X		X	X	X	
Green River	MA11-06	Headwaters, perennial portion, southwest of Sugarloaf Mountain (west of Ingraham Road), New Ashford to mouth at confluence with Hoosic River, Williamstown.	12.50	Miles	X		X	X	X	
Hopper Brook	MA11-28	Headwaters, perennial portion, east of Sperry Road, Williamstown to mouth at confluence with the Green River, Williamstown.	4.00	Miles	X		X	X	X	
Kitchen Brook	MA11-24	From the outlet of the unnamed reservoir (Kitchen Brook Reservoir), Cheshire to mouth at confluence with the Hoosic River, Cheshire.	1.40	Miles	X		X			
Mauserts Pond	MA11009	Clarksburg.	51.00	Acres				X	X	
Miller Brook	MA11-27	Headwaters, west and south of East Hoosac Street, Adams to mouth at confluence with Tophet Brook, Adams.	2.40	Miles	X		X	X	X	
Pecks Brook	MA11-18	Headwaters, perennial portion, west of West Mountatin Road, Adams to mouth at confluence with the Hoosic River, Adams.	2.70	Miles			X			
South Brook	MA11-15	Headwaters, west of Weston Mountain, Dalton to mouth at confluence with the Hoosic River, Cheshire (includes former 1998 segment: South Brook MA11-11).	4.10	Miles	X		X	X	X	
Thunder Brook	MA11-10	Headwaters, perennial portion, Cheshire to mouth at confluence with Kitchen Brook, Cheshire.	1.50	Miles			X			
West Branch Green River	MA11-22	Headwaters, perennial portion, west of Route 43, Hancock (near New York border) to mouth at confluence with Green River, Williamstown.	7.90	Miles			X			



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Hudson: Kinderhook										
Bently Brook	MA12-02	Headwaters, perennial portion, south of Brodie Mountain Road, Lanesborough to mouth at confluence with Kinderhook Creek, Hancock.	2.10	Miles	X		X	X	X	
Ipswich										
Bear Meadow Brook	MA92-07	Headwaters in Cedar Swamp, Reading to confluence with Ipswich River, Reading/North Reading.	2.80	Miles			X			
Berry Pond	MA92003	North Andover.	4.00	Acres				X	X	
Boston Brook	MA92-13	Outlet of Towne Street Pond, North Andover to confluence with the Ipswich River, Middleton (excluding approximately 0.3 miles through Salem Street Pond segment MA92076), (through former 2014 segments: Upper Boston Brook Pond MA92070 and Lower BostonBrook Pond MA92031).	7.20	Miles	X		X	X	X	
Stearns Pond	MA92061	North Andover.	43.00	Acres			X			
Wills Brook	MA92-10	Headwaters, north of Lowell Street (excluding intermittent portion), Lynnfield to confluence with Ipswich River, Lynnfield (Lynnfield/North Reading townline).	1.50	Miles	X			X	X	
Islands										
Black Point Pond	MA97-33	Chilmark (includes channel connector to Tisbury Great Pond).	0.09	Square Miles			X			
Cape Poge Bay	MA97-08	From the outlet of The Lagoon at Toms Neck, Edgartown to the confluence with Edgartown Harbor at the Cape Poge Gut, (excluding Shear Pen Pond and Pease Pond) Edgartown, Martha's Vineyard.	2.30	Square Miles			X	X	X	X
Coskata Pond	MA97-03	Pond north of Nantucket Harbor, Nantucket to confluence with Nantucket Harbor, Nantucket.	0.08	Square Miles				X	X	X
Madaket Harbor	MA97-27	Waters encompassed within imaginary lines from Eel Point to the northern tip of Esther Island, from the southern tip of Esther Island southeasterly to the opposite shore and from Jackson Point easterly to Little Neck, Nantucket.	1.44	Square Miles			X	X	X	X
Mattakeset Bay	MA97-14	Waters west of an imaginary line drawn southeasterly from Katama Point to Norton Point, Edgartown, Martha's Vineyard.	0.17	Square Miles				X	X	X
Menemsha Pond	MA97-06	Waters between Nashaquitza Pond and Menemsha Creek, Chilmark/Aquinnah, Martha's Vineyard.	0.89	Square Miles			X	X	X	X
Mill Brook	MA97-22	Outlet of Bliss Pond, Chilmark to inlet Chilmark Pond, Chilmark, Martha's Vineyard.	2.40	Miles			X			
Mill Brook	MA97-24	Source in wetlands west of Roth Woodland Road, Chilmark to Old Millpond Dam, West Tisbury, Martha's Vineyard.	3.60	Miles			X			



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Paint Mill Brook	MA97-23	Source east of Tea Lane, Chilmark to inlet of Paint Mill Brook Pond, Chilmark, Martha's Vineyard.	0.90	Miles			X			
Sunset Lake	MA97-31	Oak Bluffs.	0.01	Square Miles			X			
Tiasquam River	MA97-25	Source in wetlands west of Tea Lane, Chilmark to Warren Pond Dam, Chilmark/West Tisbury, Martha's Vineyard.	3.20	Miles			X			
Westend Pond	MA97-20	Cuttyhunk Island, Gosnold, Elizabeth Islands.	0.06	Square Miles				X	X	X
Witch Brook	MA97-36	Perennial portion south of South Gate Road, West Tisbury to mouth at Crocker Pond inlet, West Tisbury.	0.50	Miles			X			
Merrimack										
Crooked Springs Brook	MA84B-09	Headwaters, perennial portion east of Eagle Nest Road, Chelmsford to mouth at confluence with Stony Brook, Chelmsford.	1.30	Miles			X			
Johnson Creek	MA84A-15	Headwaters, Groveland (excluding intermittent portion) to confluence with Merrimack River, Groveland/Haverhill.	1.10	Miles	X		X	X	X	
Millers										
Dunn Pond	MA35021	Gardner.	18.00	Acres				X	X	
Otter River	MA35-07	Gardner WWTP, Gardner/Templeton to Seaman Paper Dam, Templeton.	4.40	Miles	X		X		X	
Priest Brook	MA35-10	Headwaters at the confluence of Towne and Scott Brooks, Royalston to the confluence with the Millers River, Winchendon. (According to SARIS includes lower portion of Scott Brook.).	6.80	Miles	X		X		X	
Ruggles Pond	MA35072	Wendell.	15.00	Acres				X	X	
Mount Hope Bay (Shore)										
Cole River	MA61-10	Headwaters, south of Wellington Street, Dighton to Wood Street, Swansea.	6.40	Miles	X		X	X	X	
Narragansett Bay (Shore)										
Bad Luck Brook	MA53-11	Headwaters, outlet Warren Upper Reservoir, Rehoboth to confluence with East Branch Palmer River, Rehoboth.	1.70	Miles	X		X	X	X	
East Branch Palmer River	MA53-08	Headwaters, near Stevens Corner Cemetery, Rehoboth to confluence with West Branch Palmer River (forming Palmer River), Rehoboth.	7.20	Miles	X		X	X	X	
West Branch Palmer River	MA53-07	Headwaters just north of Fairfield Street, Rehoboth to confluence with East Branch Palmer River (forming Palmer River), Rehoboth.	4.40	Miles	X		X	X	X	
Nashua										
Ball Brook	MA81-45	Headwaters, north of Sterling Road, Holden to mouth at confluence with Stillwater River, Sterling.	1.60	Miles			X			



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Bowers Brook	MA81-73	From outlet Barre Hill Pond, Harvard to mouth at inlet unnamed pond, Ayer.	6.10	Miles	X		X	X	X	
Bumbo Brook	MA81-94	Headwaters, perennial portion south of Streeter Road, Paxton to mouth at inlet of Pine Hill Reservoir, Paxton.	1.50	Miles			X			
Chaffins Brook	MA81-33	Headwaters, perennial portion, south of Malden Street/west of Wachusett Street, Holden to mouth at inlet of Unionville Pond, Holden.	0.90	Miles			X			
Cobb Brook	MA81-71	Headwaters, outlet small unnamed pond west of Brooks Station Road, Princeton to mouth at confluence with South Wachusett Brook, Princeton.	2.70	Miles	X		X	X	X	
Connelly Brook	MA81-57	Headwaters, southwest of Rowley Hill Road, Sterling to mouth at inlet The Quag, Sterling.	2.90	Miles			X			
East Wachusett Brook	MA81-30	Headwaters northeast of Little Wachusett Mountain, Princeton to mouth at confluence with Stillwater River, Sterling.	4.60	Miles			X			
Fall Brook	MA81-38	From outlet Fall Brook Reservoir, Leominster to inlet Lake Samoset, Leominster (formerly part of 2008 segment: Fall Brook MA81-14).	1.30	Miles	X		X	X	X	
Flag Brook	MA81-10	Headwaters, outlet Crocker Pond, Westminster to mouth at inlet of impoundment (Wachusett Station Pond) of North Nashua River, Fitchburg (excluding approximately 0.7 miles through Sawmill Pond segment MA81118).	2.20	Miles	X			X	X	
French Brook	MA81-48	Headwaters, west of Linden Street, Boylston to mouth at inlet Wachusett Reservoir (Andrews Harbor), Boylston.	1.40	Miles	X		X	X	X	
Governor Brook	MA81-70	Headwaters, east of Worcester Road (Route 31), and south of Flagg Hill, Princeton to mouth at confluence with Trout Brook, Holden.	4.40	Miles	X		X	X	X	
Gulf Brook	MA81-76	Headwaters, outlet Heald Pond, Pepperell to the New Hampshire border, Pepperell approximately 0.2 miles upstream of mouth at confluence with Nissitissit River.	2.60	Miles	X		X	X	X	
Haynes Reservoir	MA81055	Leominster.	56.00	Acres			X			
Justice Brook	MA81-41	Headwaters, outlet Stuart Pond, Sterling to mouth at confluence with Keyes Brook forming headwaters Stillwater River, Princeton/Sterling.	1.00	Miles			X			
Keyes Brook	MA81-40	Headwaters, outlet Paradise Pond, Princeton to mouth at confluence with Justice Brook forming headwaters Stillwater River, Princeton/Sterling.	3.20	Miles			X			
Locke Brook	MA81-78	From New Hampshire border, Ashby to mouth at confluence with Willard Brook, Townsend.	4.40	Miles	X		X	X	X	
Morse Brook	MA81-84	Headwaters north of Patterson Road, Shirley to mouth at confluence with the Nashua River, Shirley.	1.40	Miles			X			
Muschopauge Brook	MA81-69	Headwaters, east of Glenwood Road, Rutland to mouth at inlet Quinapoxet Reservoir, Holden.	3.50	Miles	X		X	X	X	



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Ponakin Brook	MA81-87	Headwaters north of Shoefelt Road, Lancaster to mouth at confluence with the North Nashua River, Lancaster.	1.90	Miles			X			
Poor Farm Brook	MA81-52	Headwaters, perennial portion, east of Salisbury Street, Holden to mouth at inlet Chaffin Pond, Holden.	1.50	Miles			X			
Rocky Brook	MA81-42	Headwaters, outlet Hy-Crest Pond, Sterling to mouth at confluence with Stillwater River, Sterling.	3.00	Miles			X			
Scanlon Brook	MA81-44	Headwaters, west of Birch Drive, Sterling to mouth at confluence with Stillwater River, Sterling.	1.50	Miles			X			
South Meadow Brook	MA81-67	Headwaters, outlet Fitch Pond, Sterling to mouth at inlet South Meadow Pond, Clinton.	1.80	Miles			X			
Squannacook River	MA81-19	Hollingsworth and Vose Dam (NATID: MA00443), Groton/Shirley to mouth at confluence with Nashua River, Shirley/Groton/Ayer.	3.70	Miles	X		X	X	X	
Steam Mill Brook	MA81-96	Headwaters east of Laurel Lane, Princeton to mouth at confluence with Bartlett Pond Brook, Sterling.	1.90	Miles			X			
Still River	MA81-15	From Route 117, Bolton to mouth at confluence with Nashua River, Harvard/Lancaster (prior to 2010 this segment included portion upstream of Route 117).	2.70	Miles	X			X	X	
Sucker Brook	MA81-23	Headwaters outlet Coon Tree Pond, Pepperell to mouth at confluence with Nissitissit River, Pepperell.	4.00	Miles	X		X	X	X	
Trapfall Brook	MA81-77	Headwaters, north of Jones Hill Road, Ashby to mouth at confluence with Willard Brook, Ashby.	5.50	Miles	X			X	X	
Unkety Brook	MA81-81	Headwaters, east of Chicopee Row, Groton to mouth at confluence with Nashua River, Dunstable.	6.70	Miles	X			X	X	
Unnamed Tributary	MA81-46	Unnamed tributary to Rocky Brook, headwaters south of Upper North Row Road, Sterling to mouth at the confluence with Rocky Brook, Sterling.	0.70	Miles			X			
Unnamed Tributary	MA81-50	Unnamed tributary to Wachusett Reservoir, headwaters, east of Linden Street, Boylston to mouth at inlet Wachusett Reservoir (Hastings Cove), Boylston.	1.30	Miles			X			
Unnamed Tributary	MA81-51	Unnamed tributary to Quinapoxet River, headwaters, south of Malden Street, Holden to mouth at confluence with the Quinapoxet River, Holden.	1.50	Miles			X			
Unnamed Tributary	MA81-58	Unnamed tributary to Quinapoxet Reservoir, headwaters, west of Route 68, Rutland to mouth at confluence with unnamed tributary to the Quinapoxet Reservoir (east of Bryant Road), Holden.	1.30	Miles			X			
Unnamed Tributary	MA81-59	Unnamed tributary to Quinapoxet River, headwaters, southwest of Hog Hill, Sterling to mouth at confluence with the Quinapoxet River, West Boylston.	1.60	Miles			X			



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Unnamed Tributary	MA81-83	Unnamed tributary to Pearl Hill Brook, headwaters north of Sauna Row Road, Townsend to mouth at confluence with Pearl Hill Brook, Townsend.	0.80	Miles			X			
Unnamed Tributary	MA81-85	Unnamed tributary to unnamed tributary to Slate Rock Pond, headwaters north of State Road, Lancaster to mouth at confluence with unnamed tributary west of Old Shirley Road, Lancaster.	1.30	Miles			X			
Unnamed Tributary	MA81-86	Headwaters outlet small unnamed pond northeast of Main Street, Bolton to mouth at confluence with Still River, Lancaster.	2.60	Miles			X			
Unnamed Tributary	MA81-88	Unnamed tributary to Lynde Basins, headwaters outlet Fitch Basin to mouth at inlet Lynde Basins, Sterling.	0.40	Miles			X			
Unnamed Tributary	MA81-89	Unnamed tributary to Lovell Reservoir, headwaters, perennial portion south of Billings Road, Fitchburg to mouth at inlet Lovell Reservoir (a Falulah Brook impoundment), Fitchburg.	0.70	Miles			X			
Unnamed Tributary	MA81-91	Unnamed tributary to Whitman River, headwaters south of Batherick Road, Westminster to mouth at confluence with Whitman River, Westminster.	0.80	Miles			X			
Unnamed Tributary	MA81-92	Unnamed tributary to Whitman River, headwaters west of railroad tracks downstream from Crocker Pond, Westminster to mouth at confluence with Whitman River, Westminster.	0.20	Miles			X			
Unnamed Tributary	MA81-93	Unnamed tributary to Eagle Lake, headwaters outlet Kendall Reservoir, Holden to mouth at inlet Eagle Lake, Holden.	0.30	Miles			X			
Unnamed Tributary	MA81-95	Unnamed tributary to Pine Hill Reservoir, headwaters east of Maple Avenue (Route 56), Rutland to mouth at confluence with Pine Hill Reservoir, Rutland.	0.80	Miles			X			
Unnamed Tributary	MA81-97	Unnamed tributary to Phillips Brook, headwaters east of Cowees Hill, Westminster to mouth at confluence with Phillips Brook, Westminster.	1.60	Miles			X			
Unnamed Tributary (Boylston Brook)	MA81-34	Unnamed tributary locally known as "Boylston Brook." Headwaters north of French Drive, Boylston to mouth at confluence with Potash Brook, Boylston.	0.50	Miles			X			
Unnamed Tributary (Burnt Mill Pond Brook)	MA81-65	Unnamed tributary to Snows Millpond locally known as "Burnt Mill Pond Brook", headwaters outlet Round Meadow Pond, Westminster to mouth at inlet Snows Millpond, Fitchburg/Westminster.	2.00	Miles			X			
Upper Crow Hill Pond	MA81169	Westminster.	5.00	Acres				X	X	
Warren Tannery Brook	MA81-53	Headwaters, perennial portion, north of Route 122A, Holden to mouth at confluence with Asnebumskit Brook, Holden.	1.40	Miles			X			
Witch Brook	MA81-75	Headwaters, outlet small unnamed pond west of Pierce Road, Townsend to mouth at confluence with Squannacook River (backwater area), Townsend.	2.50	Miles	X			X	X	



Category 2 waters listed alphabetically by major watershed
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Waterbody	AU_ID	Description	Size	Units	Uses Attained					
					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
North Coastal										
Alewife Brook	MA93-45	Headwaters, outlet Chebacco Lake, Essex to Landing Road, Essex.	1.40	Miles	X		X	X	X	
Lower Pond	MA93044	Saugus.	21.00	Acres				X	X	
Parker										
Bull Brook	MA91-04	Headwaters south of Linebrook Road, Ipswich to mouth at inlet Bull Brook Reservoir, Ipswich.	1.40	Miles			X			
Jackman Brook	MA91-07	Perennial portion northeast of intersection of Jewett and Tenney streets, Georgetown to mouth at confluence with Wheeler Brook, Georgetown.	0.80	Miles			X			
Ox Pasture Brook	MA91-10	Headwaters - Outlet of small unnamed impoundment east of Bradford Street, Rowley to west of Ox Pasture Hill near the Mill Creek Wildlife Management Area boundary, Rowley.	2.30	Miles			X			
Quinebaug										
Breakneck Brook	MA41-28	Headwaters outlet Breakneck Pond, Sturbridge to mouth at confluence with Quinebaug River, Sturbridge.	3.70	Miles	X		X	X	X	
Browns Brook	MA41-20	From the state line Holland, MA/Union, CT to mouth at inlet of Hamilton Reservoir, Holland.	0.80	Miles	X		X			
Hamant Brook	MA41-15	Headwaters, outlet unnamed pond, Sturbridge to mouth at confluence with the Quinebaug River, Sturbridge.	3.10	Miles			X			
Hollow Brook	MA41-24	Headwaters, west of Hollow Road, Wales to mouth at confluence with Mill Brook, Brimfield.	2.70	Miles			X			
Rocky Brook	MA41-22	Headwaters east of Chamberlain Pond (excluding intermittent portion), Douglas to the state line Douglas, MA/Thompson, CT.	1.90	Miles	X					
Stevens Brook	MA41-19	From the state line Wales, MA/Stafford, CT to mouth at inlet of Hamilton Reservoir, Holland.	4.70	Miles	X		X	X	X	
Unnamed Tributary	MA41-23	Unnamed tributary to the Quinebaug River from headwaters at the outlet of an unnamed pond on the Southbridge/Charlton border to mouth at confluence with the Quinebaug River, Southbridge.	1.90	Miles			X			
Unnamed Tributary	MA41-26	Unnamed tributary locally known as 'Freeman's Brook' from headwaters west of Cronin Road, Warren to an unnamed tributary to Long Pond, Sturbridge.	2.60	Miles			X			
Unnamed Tributary	MA41-29	Unnamed tributary to unnamed pond (eventually to Quinebaug River), headwaters (perennial portion) east of Arnold Road, Sturbridge to mouth at inlet unnamed pond north of Route 90, Sturbridge.	0.60	Miles			X			



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					Uses Attained					
Waterbody	AU_ID	Description	Size	Units	Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Shawsheen										
Elm Brook	MA83-23	Headwaters, south of Route 2A, Lincoln to beginning of channelized portion southwest of Kendall Court, Bedford (formerly part of segment MA83-05).	2.70	Miles			X			
Meadow Brook	MA83-12	Headwaters, outlet Ames Pond, Tewksbury, to confluence with Strong Water Brook, Tewksbury.	1.70	Miles			X			
Spring Brook	MA83-14	Headwaters, wetland northeast of Route 3 Billerica, to confluence with Shawsheen River, Bedford.	2.60	Miles	X		X	X	X	
South Coastal										
Bartlett Pond	MA94005	Plymouth.	33.00	Acres	X					
Ben Mann Brook	MA94-41	Headwaters, south of Abington Rockland Reservoir, Rockland to mouth at confluence with Cushing Brook, Hanover.	2.00	Miles	X			X	X	
Bloody Pond	MA94015	Plymouth.	101.00	Acres			X			
Eel River	MA94-37	Headwaters (restored), southeast of College Pond Road, Plymouth to inlet Russell Millpond, Plymouth (formerly part of 2014 segment: Eel River MA94-23).	1.40	Miles	X		X	X	X	
Fresh Pond	MA94040	Plymouth.	60.00	Acres			X			
Gunners Exchange Pond	MA94055	Plymouth.	26.00	Acres			X			
Hedges Pond	MA94065	Plymouth.	27.00	Acres			X			
Herring River	MA94-44	Headwaters outlet Great Herring Pond, Bourne to confluence with Cape Cod Canal, Bourne (includes the approximately 0.3 miles through Foundry Pond and the unnamed tributary locally known as 'The Herring Run').	1.30	Miles			X			
Hoyts Pond	MA94070	Plymouth.	20.00	Acres			X			
Iron Mine Brook	MA94-24	Headwaters north of Route 139, Hanover to mouth at confluence with Indian Head River, Hanover (area associated with North River Corridor designated as ORW).	1.40	Miles	X		X	X	X	
Island Pond	MA94074	[west of the locality of Cedarville] Plymouth.	52.00	Acres			X			
Little Herring Pond	MA94082	Plymouth.	81.00	Acres			X			
Little Pond	MA94182	Plymouth.	40.00	Acres			X			
Little South Pond	MA94087	Plymouth.	63.00	Acres			X			
Lout Pond	MA94090	Plymouth.	18.00	Acres			X			
Morey Hole	MA94102	Plymouth.	22.00	Acres			X			
North Triangle Pond	MA94110	Plymouth.	22.00	Acres			X			
Philips Brook	MA94-48	Headwaters north of the Summer Street/Cross Street intersection, Duxbury to the inlet of Northwest Duxbury Pond, Duxbury.	0.80	Miles			X			



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Waterbody	AU_ID	Description	Size	Units	Uses Attained					
					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Plymouth Bay	MA94-17	The waters southeast of a line drawn from Saquish Head to the tip of Plymouth Beach, Plymouth and west of a line from Gurnet Point to Rocky Point, Plymouth.	10.30	Square Miles			X	X	X	X
Triangle Pond	MA94-160	Plymouth.	14.00	Acres			X			
Unnamed Tributary	MA94-55	Unnamed tributary (locally known as 'Marshfield Fairgrounds Brook') to South River, from headwaters east of Proctor Street, Marshfield to tidal portion east of Willow Street, Marshfield.	0.80	Miles			X			
Taunton										
Canoe River	MA62-64	Headwaters in wetland east of Cow Hill, Sharon to inlet Beaumont Pond, Foxborough (formerly part of 2014 segment: Canoe River MA62-27).	3.10	Miles	X		X	X	X	
Canoe River	MA62-66	From outlet of Hartwell School Pond, Mansfield to mouth at inlet Winnecunnnet Pond, Norton (formerly part of 2014 segment: Canoe River MA62-27).	6.90	Miles			X			
Hockomock River	MA62-35	Headwaters, perennial portion, west of Route 24, West Bridgewater to mouth at confluence with Town River, Bridgewater.	4.30	Miles			X			
Nemasket River	MA62-26	From the Middleborough WWTP (NPDES: MA0101591) discharge, Middleborough to mouth at confluence with the Taunton River, Middleborough.	5.10	Miles			X			
Poor Meadow Brook	MA62-34	Headwaters, from wetland near County Street, Hanson to mouth at confluence with Satucket River, East Bridgewater.	6.90	Miles			X			
Rattlesnake Brook	MA62-45	Headwaters east of Rigenbach Road, Fall River to mouth at confluence with Assonet River, Freetown.	3.20	Miles			X			
Rumford River	MA62-40	From outlet Norton Reservoir, Norton to mouth at confluence with Wading River forming headwaters Threemile River, Norton (formerly part of 2004 segment: Rumford River MA62-15).	4.50	Miles	X			X	X	
Sawmill Brook	MA62-36	Headwaters, outlet Ice Pond, Bridgewater to mouth at confluence with the Taunton River, Bridgewater.	1.90	Miles			X			
Unnamed Tributary	MA62-69	Unnamed Tributary to unnamed tributaries to Poquoy Brook Pond, headwaters in wetland north of Kenneth Welch Drive, Lakeville to mouth at confluence with unnamed tributary east of Route 18 (Bedford Street), Lakeville.	0.60	Miles			X			
Wading River	MA62-61	From outlet Barrowsville Pond, Norton to mouth at confluence with Rumford River, forming headwaters Threemile River, Norton (formerly part of 2014 segment: Wading River MA62-49 [MA62-17 (2004)]).	3.50	Miles	X		X	X	X	



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(named uses denoted by X)					Uses Attained					
Waterbody	AU_ID	Description	Size	Units	Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Westfield										
Bartlett Brook	MA32-50	Headwaters (perennial portion), between Mountain and Prospect streets, Plainfield to mouth at confluence with Westfield River, Cummington.	2.00	Miles			X			
Bedlam Brook	MA32-33	Headwaters (perennial portion), north of Blandford Road, Blandford to mouth at confluence with Peebles Brook, Blandford.	2.80	Miles	X		X	X	X	
Bradley Brook	MA32-21	Headwaters, confluence Black and Stage brooks, Russell to mouth at confluence with Westfield River, Russell.	0.70	Miles	X			X	X	
Bronson Brook	MA32-45	Headwaters, north of Trouble Road, Cummington to mouth at confluence with West Falls Branch, Worthington. (formerly identified by the Massachusetts Stream Classification Program as West Branch).	4.20	Miles			X			
Depot Brook	MA32-17	Source, north of Beach Road, Washington to mouth at confluence with Yokum Brook (forming headwaters of West Branch Westfield River), Becket.	5.90	Miles	X		X	X	X	
Dickinson Brook	MA32-34	Source, confluence of Trumble Brook and Seymour Brook, Granville to mouth at confluence with Munn Brook, Granville.	3.40	Miles	X		X	X	X	
Factory Brook	MA32-42	Headwaters, east of Ridge Road, in Middlefield State Forest, Peru to mouth at confluence with West Branch Westfield River, Middlefield.	7.60	Miles			X			
Fuller Brook	MA32-64	Headwaters, outlet wetland west at Mongue Road, Peru to mouth at confluence with Middle Branch Westfield River, Worthington.	4.20	Miles			X			
Glendale Brook	MA32-10	Headwaters in a wetland in Peru State Forest, Peru to mouth at confluence with Middle Branch Westfield River, Middlefield.	6.00	Miles	X		X	X	X	
Great Brook	MA32-25	Source, outlet Congamond Lakes, Southwick to mouth at confluence with Westfield River, Westfield.	10.80	Miles	X			X	X	
Kearney Brook	MA32-46	Headwaters, north of Powell Road and east of FAA Road, Cummington to mouth at confluence with Bronson Brook, Worthington.	3.20	Miles			X			
Kinne Brook	MA32-32	Headwaters (perennial portion), north of Adams Road, Worthington to mouth at confluence with Middle Branch Westfield River, Chester.	4.00	Miles	X		X	X	X	
Meadow Brook	MA32-11	Headwaters, outlet unnamed pond south of Route 116, Plainfield to mouth at confluence with Westfield River, Cummington.	4.60	Miles	X		X	X	X	
Middle Branch Westfield River	MA32-03	Outlet Littleville Dam, Chester/Huntington to mouth at confluence with Westfield River, Huntington.	1.10	Miles	X			X	X	
Middle Branch Westfield River	MA32-66	From Kinnebrook Road, Dayville (locality in Chester) to inlet of Littleville Lake, just upstream from boat ramp (off southern end of Kinnebrook Road), Chester (formerly part of 2014 segment: Middle Branch Westfield River MA32-02).	0.60	Miles	X			X	X	



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Waterbody	AU ID	Description	Size	Units	Uses Attained					
					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Mill Brook	MA32-49	Headwaters, south of Hawley Street, Plainfield to mouth at confluence with Westfield River, Cummington.	6.00	Miles			X			
Moose Meadow Brook	MA32-40	Headwaters, west of Bungay Mountain, east of New State Road, Montgomery to inlet Westfield Reservoir, Montgomery (formerly part of segment MA32-23).	2.90	Miles			X			
Munn Brook	MA32-59	Headwaters, outlet Winchell Reservoir, Granville to mouth at confluence with Little River, Westfield.	5.50	Miles			X			
North Branch Swift River	MA32-54	Headwaters, outlet small unnamed pond west of Grant Street, Plainfield to mouth at confluence with Swift River, Cummington.	6.90	Miles			X			
Paucatuck Brook	MA32-29	From outlet of Bearhole Reservoir, West Springfield to mouth at confluence with Westfield River, West Springfield.	1.50	Miles	X		X	X	X	
Pond Brook	MA32-24	Headwaters, outlet Chapin Pond, Westfield to mouth at confluence with Powdermill Brook, Westfield.	3.90	Miles	X		X	X	X	
Pond Brook	MA32-44	Headwaters, outlet Norwich Pond, Huntington to mouth at confluence with Westfield River, Huntington.	3.10	Miles	X		X			
Roaring Brook	MA32-30	Headwaters (perennial portion), north of Horse Hill in Huntington State Forest, east of County Road, Huntington to mouth at confluence with Westfield River, Montgomery.	4.30	Miles	X		X	X	X	
Roaring Brook	MA32-61	Headwaters, outlet small unnamed pond north of Lyman Road, Chester to mouth at confluence with West Branch Westfield River, Huntington.	4.50	Miles			X			
Sanderson Brook	MA32-31	Headwaters (perennial portion), in the Chester/Blandford State Forest, north of Chester Road, Blandford to mouth at confluence with West Branch Westfield River, Chester.	2.70	Miles	X		X	X	X	
Shaker Mill Brook	MA32-18	Headwaters, west of Watson Road, Washington to mouth at confluence with Depot Brook, Becket.	4.10	Miles	X		X	X	X	
Shaw Brook	MA32-52	Headwaters, north of Shaw Road, Windsor to mouth at confluence with Westfield Brook, Windsor.	2.20	Miles			X			
Stage Brook	MA32-60	Headwaters, confluence of Freeland Brook and Wigwam Brook, Russell to mouth at confluence with Black Brook (forming headwaters Bradley Brook), Russell.	1.00	Miles			X			
Stones Brook	MA32-48	Headwaters, outlet small unnamed pond north of Dyers Road, Ashfield to mouth at confluence with Swift River, Goshen.	4.70	Miles			X			
Swift River	MA32-12	Headwaters, west of Plainfield Road, Hawley to mouth at confluence with Westfield River at village of Swift River, Cummington.	11.30	Miles	X		X	X	X	
Tower Brook	MA32-47	Headwaters, north of Dodwells Road, Cummington to mouth at confluence with Westfield River, Chesterfield.	4.10	Miles			X			



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Waterbody	AU ID	Description	Size	Units	Uses Attained					
					Aesthetic	Fish Consumption	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Walker Brook	MA32-20	Headwaters, outlet Center Pond (north of YMCA Road), Becket to mouth at confluence with West Branch Westfield River, Chester.	7.10	Miles	X		X	X	X	
Wards Stream	MA32-15	Headwaters, south of Cold Street, Worthington to mouth at confluence with Watts Stream (forming headwaters Little River), Ringville (locality in Worthington).	5.10	Miles	X		X	X	X	
Watts Stream	MA32-14	Headwaters, north of Buffington Hill Road, Worthington to mouth at confluence with Wards Stream (forming headwaters Little River), Ringville (locality in Worthington).	5.20	Miles	X		X	X	X	
West Branch Westfield River	MA32-01	Headwaters, confluence of Depot Brook and Yokum Brook, Becket to mouth at confluence with Westfield River, Huntington (HQP qualifier applies to portion of river upstream of Chester Center).	17.20	Miles	X		X	X	X	
Westfield Brook	MA32-51	Headwaters, outlet wetland north of Hill Cemetery Road, Windsor to mouth at confluence with Westfield River, Cummington.	8.60	Miles			X			
Westfield River	MA32-05	Confluence with Middle Branch Westfield River, Huntington to Route 20 bridge, Westfield.	17.70	Miles	X		X	X	X	
Westfield River	MA32-06	Route 20 bridge, Westfield to Westfield city boundary with West Springfield and Agawam.	1.90	Miles	X		X	X	X	
Westfield River	MA32-07	Westfield/West Springfield/Agawam city line to mouth at confluence with Connecticut River, Agawam.	8.50	Miles	X		X	X	X	
Yokum Brook	MA32-19	Headwaters, outlet Buckley-Dunton Lake, south of County Road, Becket to mouth at confluence with Depot Brook (forming headwaters of West Branch Westfield River), Becket.	4.00	Miles	X		X	X	X	



Category 3 waters listed alphabetically by major watershed
"No uses assessed"

Waterbody	AU_ID	Description	Size	Units
Blackstone				
Bell Pond	MA51009	Worcester.	10.00	Acres
Brooklawn Parkway Pond	MA51195	Shrewsbury.	2.00	Acres
Carpenter Reservoir	MA51015	Northbridge.	79.00	Acres
Chase Pond	MA51017	Douglas.	11.00	Acres
Chockalog Pond	MA51018	Uxbridge.	11.00	Acres
Clark Reservoir	MA51022	Sutton.	30.00	Acres
Crane Pond	MA51030	Blackstone.	1.00	Acres
Dark Brook Pond	MA51034	Sutton.	18.00	Acres
Doctors Pond	MA51194	Uxbridge.	1.00	Acres
Dudley Pond	MA51041	Douglas.	8.00	Acres
Greene Brook	MA51-30	Headwaters, perennial portion, north of Linden Street, Douglas to mouth at confluence with Chockalog River, Douglas.	1.60	Miles
Hales Pond	MA51057	Wrentham.	4.00	Acres
Hathaway Pond	MA51059	Millbury/Sutton.	8.00	Acres
Holden Reservoir 1	MA51063	Holden.	129.00	Acres
Holden Reservoir 2	MA51064	Holden.	51.00	Acres
Houghton Pond	MA51067	Uxbridge.	2.00	Acres
Howe Pond	MA51069	Millbury.	4.00	Acres
Hunt Pond	MA51072	Douglas.	2.00	Acres
Joels Pond	MA51076	Uxbridge.	11.00	Acres
Joes Rock Pond	MA51077	Wrentham.	12.00	Acres
Kettle Brook Reservoir No. 1	MA51079	Leicester.	11.00	Acres
Kettle Brook Reservoir No. 2	MA51080	Leicester.	29.00	Acres
Kettle Brook Reservoir No. 3	MA51081	Paxton/Leicester.	36.00	Acres
Kettle Brook Reservoir No. 4	MA51082	Paxton.	114.00	Acres
Lake Hiawatha	MA51062	Bellingham/Blackstone.	58.00	Acres
Lynde Brook Reservoir	MA51090	Leicester.	130.00	Acres
Martin Street Pond	MA51095	Douglas.	3.00	Acres
Merrill Pond No. 3	MA51098	Sutton.	13.00	Acres
Merrill Pond No. 4	MA51099	Sutton.	20.00	Acres
Nipmuck Pond	MA51111	Mendon.	85.00	Acres
Number 2 Pond	MA51115	Sutton/Oxford.	9.00	Acres
Peabody Pond	MA51119	Uxbridge.	6.00	Acres
Pout Pond	MA51121	Uxbridge.	9.00	Acres
Pout Pond	MA51122	Boylston.	14.00	Acres



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Waterbody	AU_ID	Description	Size	Units
Pratts Pond	MA51124	Grafton.	4.00	Acres
Ramshorn Pond	MA51126	Sutton/Millbury.	131.00	Acres
Reservoir No. 4	MA51128	Sutton.	10.00	Acres
Schoolhouse Pond	MA51144	Sutton.	7.00	Acres
Sewall Pond	MA51191	Boylston.	13.00	Acres
Silver Hill Pond	MA51149	Milford.	6.00	Acres
Slaughterhouse Pond	MA51153	Millbury/Sutton.	10.00	Acres
Stoneville Reservoir	MA51161	Auburn.	60.00	Acres
Stump Pond	MA51162	Oxford.	20.00	Acres
Town Farm Pond	MA51168	Sutton.	6.00	Acres
Unnamed Tributary	MA51-54	Unnamed tributary to Whitin Reservoir, headwaters east of Grassy Pond, Douglas to mouth at inlet Whitin Reservoir, Douglas.	2.30	Miles
Whitin Reservoir	MA51179	Douglas.	342.00	Acres
Windle Pond	MA51184	Grafton/Shrewsbury.	4.00	Acres
Boston Harbor: Mystic				
Bellevue Pond	MA71004	Medford.	2.00	Acres
Sales Creek	MA71-12	Headwaters near Route 145, Revere to Bennington Street tidegate/confluence with Belle Isle Inlet, Boston/Revere.	0.01	Square Miles
Spot Pond	MA71039	Stoneham/Medford.	290.00	Acres
Boston Harbor: Neponset				
Blue Hills Reservoir	MA73004	Quincy.	7.00	Acres
Buckmaster Pond	MA73006	Westwood.	34.00	Acres
Flynns Pond	MA73019	Medfield.	7.00	Acres
Hammer Shop Pond	MA73023	Sharon.	2.00	Acres
Lymans Pond	MA73021	Westwood.	25.00	Acres
Sprague Pond	MA73053	Boston/Dedham.	7.00	Acres
Unnamed Tributary	MA73-10	Headwaters, outlet Turner Pond, Walpole to confluence with Neponset River, Walpole.	0.40	Miles
Unnamed Tributary	MA73-14	Headwaters, outlet Willet Pond, Walpole/Norwood, to inlet Ellis Pond, Norwood.	0.40	Miles
Boston Harbor: Weymouth & Weir				
Accord Pond	MA74030	Hingham/Norwell/Rockland (formerly reported as 2004 segment: Accord Pond MA94002).	103.00	Acres
Blue Hill River	MA74-25	Headwaters, perennial portion south of Route 93 on the Milton/Randolph border, to mouth at confluence with Farm River at the Randolph/Braintree border (where name changes to Farm River).	2.90	Miles
Old Quincy Reservoir	MA74017	Braintree.	27.00	Acres
Trout Brook	MA74-12	Headwaters southwest of South Street, Holbrook to inlet Lake Holbrook, Holbrook.	1.20	Miles
Unnamed Tributary	MA74-26	Unnamed tributary to Monaquot River, headwaters outlet Sunset Lake, Braintree to mouth at confluence with Monaquot River, south of Pond Street, Braintree.	0.40	Miles
Buzzards Bay				
Abner Pond	MA95001	Plymouth.	9.00	Acres
Agawam River	MA95-28	Outlet Mill Pond, Wareham to Wareham WWTP outfall, Wareham.	0.61	Miles



Category 3 waters listed alphabetically by major watershed
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Waterbody	AU_ID	Description	Size	Units
Bates Pond	MA95007	Carver.	19.00	Acres
Big Rocky Pond	MA95119	(Rocky Pond) Plymouth.	18.00	Acres
Big Sandy Pond	MA95011	Plymouth.	133.00	Acres
Blackmore Reservoir	MA95015	Wareham.	43.00	Acres
Buttonwood Park Pond	MA95020	New Bedford.	12.00	Acres
Cedar Dell Lake	MA95021	Dartmouth.	23.00	Acres
Cedar Lake	MA95-96344	Falmouth (formerly reported as 2010 segment: Cedar Lake MA96344).	20.00	Acres
Deer Pond	MA95036	Plymouth.	9.00	Acres
Dicks Pond	MA95038	Wareham.	42.00	Acres
East Head Pond	MA95177	Carver/Plymouth.	92.00	Acres
Ezekiel Pond	MA95051	Plymouth.	36.00	Acres
Fawn Pond	MA95053	Plymouth.	44.00	Acres
Five Mile Pond	MA95056	Plymouth.	22.00	Acres
Flax Pond	MA95-96087	Bourne (formerly reported as 2010 segment: Flax Pond MA96087).	20.00	Acres
Gallows Pond	MA95059	Plymouth.	49.00	Acres
Glen Charlie Pond	MA95061	Wareham.	157.00	Acres
Horseshoe Pond	MA95075	Wareham.	59.00	Acres
Kings Pond	MA95078	Plymouth.	22.00	Acres
Little Long Pond	MA95088	Plymouth.	47.00	Acres
Little Long Pond	MA95089	Wareham/Plymouth.	12.00	Acres
Little Rocky Pond	MA95091	Plymouth.	10.00	Acres
Little Sandy Pond	MA95092	Plymouth.	29.00	Acres
Little West Pond	MA95093	Plymouth.	25.00	Acres
Long Duck Pond	MA95095	Plymouth.	22.00	Acres
Long Pond	MA95096	Plymouth.	207.00	Acres
Mare Pond	MA95172	Plymouth (formerly reported as 1996 segment: Mare Pond MA94097).	13.00	Acres
Micajah Pond	MA95102	Plymouth.	20.00	Acres
New Long Pond	MA95112	Plymouth.	21.00	Acres
Rocky Meadow Brook Pond	MA95118	Carver.	11.00	Acres
Rocky Pond	MA95179	Plymouth.	20.00	Acres
Round Pond	MA95123	Plymouth.	20.00	Acres
Sand Pond	MA95127	Wareham.	14.00	Acres
Sandy Pond	MA95128	Wareham.	15.00	Acres
South Meadow Brook Pond	MA95139	Carver.	25.00	Acres
South Meadow Pond	MA95140	Carver.	22.00	Acres
Southwest Atwood Bog Pond	MA95141	Carver.	12.00	Acres
Spectacle Pond	MA95142	Wareham.	41.00	Acres



Category 3 waters listed alphabetically by major watershed
"No uses assessed"

Waterbody	AU_ID	Description	Size	Units
Three Cornered Pond	MA95145	Plymouth.	12.00	Acres
Tinkham Pond	MA95148	Mattapoisett/Acushnet.	17.00	Acres
Union Pond	MA95152	Wareham.	17.00	Acres
Unnamed Tributary	MA95-57	Headwaters, outlet of Cornell Pond, Dartmouth to mouth at confluence with Shingle Island River, Dartmouth.	1.00	Miles
Vaughn Pond	MA95153	Carver.	20.00	Acres
Wankinco River	MA95-85	From the outlet of Tihonet Pond, Wareham to the inlet of Parker Mills Pond, Wareham (formerly part of segment MA95-30).	0.70	Miles
Wankinco River	MA95-86	Headwaters, outlet East Head Pond, Carver/Plymouth (follows border through cranberry bogs to inlet Tihonet Pond, Carver/Plymouth (formerly part of segment MA95-30).	3.60	Miles
Whites Pond	MA95168	Plymouth.	34.00	Acres
Cape Cod				
Blackfish Creek	MA96-123	Headwaters south of Lecount Hollow Road, Wellfleet to mouth at confluence with Wellfleet Harbor, Wellfleet (area within Cape Cod National Seashore designated ORW).	0.01	Square Miles
Bog Pond	MA96024	Falmouth.	3.00	Acres
Bourne Pond	MA96026	Falmouth.	9.00	Acres
Clapps Pond	MA96035	Provincetown (area associated with Cape Cod National Seashore designated as ORW).	40.00	Acres
Coonamesett Pond	MA96043	Falmouth.	159.00	Acres
Elbow Pond	MA96077	Brewster.	32.00	Acres
Flax Pond	MA96090	Dennis.	15.00	Acres
Flax Pond	MA96354	Falmouth.	21.00	Acres
Fresh Brook	MA96-126	Estuarine portion west of Route 6, Wellfleet to mouth at confluence with Wellfleet Harbor, Wellfleet.	0.004	Square Miles
Goose Pond	MA96106	Chatham.	35.00	Acres
Gull Pond	MA96123	Wellfleet.	104.00	Acres
Hatches Creek	MA96-124	Estuarine portion west of West Street, at the Wellfleet/Eastham border to mouth at confluence with Wellfleet Harbor, Wellfleet.	0.02	Square Miles
Herring Pond	MA96133	Eastham.	42.00	Acres
Herring Pond	MA96134	Wellfleet.	18.00	Acres
Hoxie Pond	MA96146	Sandwich.	8.00	Acres
Kinnacum Pond	MA96163	Wellfleet.	2.00	Acres
Long Pond	MA96180	Yarmouth.	54.00	Acres
Mill Pond	MA96206	Yarmouth.	6.00	Acres
Mill Pond	MA96356	Harwich/Brewster.	12.00	Acres
Muddy Creek	MA96-115	Headwaters, outlet North Dennis Road Pond, Yarmouth to mouth at inlet Follins Pond, Yarmouth.	0.004	Square Miles
North Pond	MA96225	Barnstable.	4.00	Acres
Nye Pond	MA96228	Sandwich.	6.00	Acres
Pilgrim Lake	MA96246	Orleans.	38.00	Acres
Run Pond	MA96265	Dennis.	7.00	Acres



Category 3 waters listed alphabetically by major watershed
"No uses assessed"

Waterbody	AU_ID	Description	Size	Units
Rushy Marsh Pond	MA96266	Barnstable.	14.00	Acres
Scargo Lake	MA96279	Dennis.	54.00	Acres
Schoolhouse Pond	MA96281	Chatham.	20.00	Acres
Shallow Pond	MA96285	Barnstable.	76.00	Acres
Shubael Pond	MA96293	Barnstable.	55.00	Acres
Smith Pond	MA96301	Brewster.	11.00	Acres
Unnamed Tributary	MA96-131	Unnamed tributary to Coonamessett River, headwaters outlet Flax Pond, Falmouth to mouth at confluence with Coonamessett River, Falmouth.	0.30	Miles
Village Pond	MA96329	Truro.	2.00	Acres
White Pond	MA96338	Dennis/Harwich.	11.00	Acres
Charles				
Brookline Reservoir	MA72010	Brookline.	21.00	Acres
Chestnut Hill Reservoir	MA72023	Boston.	82.00	Acres
Farm Pond	MA72039	Sherborn.	125.00	Acres
Halls Pond	MA72043	Brookline.	0.60	Acres
Hammond Pond	MA72044	Newton.	22.00	Acres
Jennings Pond	MA72053	Natick.	7.00	Acres
Little Farm Pond	MA72064	Sherborn.	24.00	Acres
Norumbega Reservoir	MA72086	[North Basin] Weston.	14.00	Acres
Norumbega Reservoir	MA72087	[South Basin] Weston.	38.00	Acres
Sandy Pond	MA72105	Lincoln.	157.00	Acres
Sewall Brook	MA72-49	Headwaters outlet Washington Street Pond, south off Route 16 (Washington Street), Sherborn to mouth at confluence with Charles River, Sherborn.	3.00	Miles
South End Pond	MA72109	Millis.	30.00	Acres
Stony Brook	MA72-37	Headwaters, outlet Turtle Pond, Boston to culvert entrance, Boston (two culverted portions totaling approximately 740 feet (0.14mile)).	1.60	Miles
Stony Brook Reservoir	MA72114	Waltham/Weston.	64.00	Acres
Todd Pond	MA72117	Lincoln.	9.00	Acres
Walker Pond	MA72126	Millis.	9.00	Acres
Waseeka Sanctuary Pond	MA72155	Holliston.	17.00	Acres
Weld Pond	MA72131	Dedham.	27.00	Acres
Weston Reservoir	MA72134	Weston.	59.00	Acres
Weston Station Pond	MA72135	Weston.	38.00	Acres
Chicopee				
Adams Pond	MA36001	Oakham.	30.00	Acres
Bemis Road Pond	MA36012	Hubbardston.	16.00	Acres
Bennett Street Pond	MA36014	Palmer.	6.00	Acres
Bickford Pond	MA36015	Hubbardston/Princeton.	163.00	Acres
Brigham Pond	MA36020	Hubbardston.	45.00	Acres



Category 3 waters listed alphabetically by major watershed
"No uses assessed"

Waterbody	AU_ID	Description	Size	Units
Brooks Pond	MA36022	Petersham.	87.00	Acres
Carter Pond	MA36029	Petersham.	44.00	Acres
Cloverdale Street Pond	MA36036	Rutland.	19.00	Acres
Comins Pond	MA36037	Warren.	26.00	Acres
Conant Brook Reservoir	MA36038	Monson.	4.00	Acres
Cranberry Meadow Pond	MA36040	Spencer/Charlton.	69.00	Acres
Cranberry River	MA36-20	Headwaters, outlet Cranberry Meadow Pond, Spencer to mouth at confluence with Sevenmile River, Spencer (through former 2008 segment: Howe Pond MA36073).	3.60	Miles
Crystal Lake	MA36043	Palmer.	16.00	Acres
Cunningham Pond	MA36044	Hubbardston.	27.00	Acres
Demond Pond	MA36051	Rutland.	120.00	Acres
Dimmock Pond	MA36053	Springfield.	9.00	Acres
Edson Pond	MA36180	Rutland.	36.00	Acres
Fivemile Pond	MA36061	Springfield.	36.00	Acres
Fivemile Pond South	MA36182	Springfield.	4.00	Acres
Gaston Pond	MA36065	Barre.	15.00	Acres
Haviland Pond	MA36069	Ludlow.	25.00	Acres
Higher Brook	MA36-42	Headwaters, perennial portion, south of Route 21, Ludlow (through former 2008 segment: Harris Pond MA36067) to mouth at Ludlow/Chicopee corporate boundary where the stream name changes to Fuller Brook.	6.30	Miles
Horse Pond	MA36072	North Brookfield.	63.00	Acres
Jabish Brook	MA36-73	From Jabish Canal, Belchertown to mouth at confluence with Swift River, Belchertown (formerly part of 2016 segment: Jabish Brook MA36-43).	6.50	Miles
Knights Pond	MA36077	Belchertown.	36.00	Acres
Lovewell Pond	MA36085	Hubbardston.	82.00	Acres
Mare Meadow Reservoir	MA36090	Westminster/Hubbardston.	240.00	Acres
Mare Meadow Reservoir North	MA36178	Westminster.	38.00	Acres
Moose Hill Reservoir	MA36179	Spencer/Leicester.	52.00	Acres
Moosehorn Brook	MA36-66	Headwaters, east of Daniel Shays Highway (Route 202), New Salem to mouth at inlet Quabbin Reservoir, New Salem.	1.30	Miles
Moulton Pond	MA36098	Rutland.	65.00	Acres
Muddy Pond	MA36102	Oakham/Rutland.	23.00	Acres
Murphy Pond	MA36103	Ludlow.	6.00	Acres
Palmer Reservoir	MA36115	Palmer.	8.00	Acres
Paradise Lake	MA36116	Monson.	17.00	Acres
Pattaquatic Pond	MA36117	Palmer.	18.00	Acres
Peppers Mill Pond	MA36121	Ware.	11.00	Acres
Perry Hill Pond	MA36122	Hubbardston.	23.00	Acres
Queen Lake	MA36132	Phillipston.	139.00	Acres



Category 3 waters listed alphabetically by major watershed
"No uses assessed"

Waterbody	AU_ID	Description	Size	Units
Shaw Pond	MA36138	Leicester.	64.00	Acres
Springfield Reservoir	MA36145	Ludlow.	393.00	Acres
Stone Bridge Pond	MA36148	Templeton.	32.00	Acres
Thayer Pond	MA36181	Rutland.	46.00	Acres
Thompson Lake	MA36154	Palmer.	34.00	Acres
Thompsons Pond	MA36155	Spencer.	116.00	Acres
Town Barn Beaver Pond	MA36156	Petersham.	20.00	Acres
Waite Pond	MA36161	Hubbardston.	35.00	Acres
Concord (SuAsCo)				
Assabet Brook	MA82B-17	Headwaters, outlet Fletchers Pond, Stow to mouth at confluence with the Assabet River, Stow.	2.00	Miles
Broad Meadow Brook	MA82A-39	Headwaters east of Concord Road, Marlborough to mouth at inlet Sudbury Reservoir, Marlborough.	1.20	Miles
Cedar Swamp Pond	MA82016	Westborough.	17.00	Acres
Cold Spring Brook	MA82A-18	Headwaters outlet Bloods Pond, Hopkinton to inlet Ashland Reservoir, Ashland.	1.80	Miles
Denny Brook	MA82A-27	Headwaters, perennial portion, outlet unnamed pond west of South Street, Westborough to mouth at confluence with Jackstraw Brook, Westborough.	0.60	Miles
Elm Street Pond	MA82032	Chelmsford/Carlisle.	65.00	Acres
Fiske Street Pond	MA82037	Carlisle/Chelmsford.	38.00	Acres
Fort Meadow Brook	MA82B-11	Headwaters, outlet Fort Meadow Reservoir, Marlborough/Hudson to mouth at confluence with Assabet River, Hudson.	2.70	Miles
Fort Pond	MA82043	Littleton.	102.00	Acres
Gates Pond	MA82047	Berlin.	73.00	Acres
Gates Pond Brook	MA82B-10	Headwaters, outlet Gates Pond, Berlin to mouth at confluence with the Assabet River, Berlin.	1.00	Miles
Gleasons Pond	MA82048	Framingham.	11.00	Acres
Howard Brook	MA82B-26	Headwaters, perennial portion east of Green Street, Northborough to mouth at confluence with Assabet River, Northborough.	3.50	Miles
Jackstraw Brook	MA82A-28	From the most downstream crossing of Upton Road (first crossing south of Hopkinton Road), Westborough to mouth at inlet of Cedar Swamp Pond, Westborough.	1.50	Miles
Learned Pond	MA82069	Framingham.	34.00	Acres
Meadow Pond	MA82129	Carlisle.	12.00	Acres
Milham Reservoir	MA82077	Marlborough.	67.00	Acres
Nagog Pond	MA82082	Littleton/Acton.	278.00	Acres
Piccadilly Brook	MA82A-30	Headwaters, outlet Westboro Reservoir, Westborough to mouth at inlet to Cedar Swamp Pond, Westborough.	2.00	Miles
Rutters Brook	MA82A-29	From headwaters near Robin Road, Westborough to mouth at confluence with Jackstraw Brook, Westborough.	2.00	Miles
Smith Pond	MA82099	Northborough.	16.00	Acres
Solomon Pond	MA82100	Northborough.	21.00	Acres
Taylor Brook	MA82B-08	Headwaters, outlet Puffer Pond, Maynard to mouth at confluence with the Assabet River, Maynard.	1.80	Miles
Tripp Pond	MA82107	Hudson.	4.00	Acres



Category 3 waters listed alphabetically by major watershed
"No uses assessed"

Waterbody	AU_ID	Description	Size	Units
Unnamed Tributary	MA82B-16	Unnamed tributary to Assabet River (locally considered part of Spencer Brook), outlet Angiers Pond, Concord to mouth at confluence with the Assabet River, Concord.	0.50	Miles
Unnamed Tributary	MA82B-28	Unnamed tributary to Assabet River Reservoir, headwaters, perennial portion north of Nourse Street (Route 30), Westborough to mouth at inlet of Assabet River Reservoir, Westborough.	0.30	Miles
Unnamed Tributary	MA82B-31	Unnamed tributary to Hop Brook, headwaters west of Tennis Drive, Shrewsbury to inlet Eaton Pond, Shrewsbury.	1.00	Miles
West Pond	MA82115	Bolton.	19.00	Acres
Westborough Reservoir	MA82114	Westborough.	41.00	Acres
White Pond	MA82119	Hudson/Stow.	49.00	Acres
Williams Lake	MA82121	Marlborough.	69.00	Acres
Willis Pond	MA82122	Sudbury.	67.00	Acres
Connecticut				
Brickyard Brook	MA34-13	Headwaters, perennial portion, Westfield to mouth at confluence with Manhan River, Westfield.	1.60	Miles
Buffum Brook	MA34-49	Headwaters, west of West Pelham Road, Shutesbury to mouth at confluence with Harris Brook, (forming headwaters Amethyst Brook), Pelham (variant name: Buffam Brook).	3.00	Miles
Cooley Brook	MA34-20	Headwaters, Longmeadow to mouth at confluence with Connecticut River, Longmeadow.	1.40	Miles
Factory Hollow Pond	MA34021	Amherst.	12.00	Acres
Green Pond	MA34028	Montague.	15.00	Acres
Lake Pleasant	MA34070	Montague.	54.00	Acres
Loon Pond	MA34045	Springfield.	26.00	Acres
Lower Highland Lake	MA34047	Goshen.	91.00	Acres
Manhan River	MA34-10	Headwaters, northeast of Norwich Pond, Huntington to inlet Tighe Carmody Reservoir, Southampton (through former 2006 segment: White Reservoir MA34100).	6.60	Miles
Mountain Street Reservoir	MA34056	Williamsburg/Hatfield/Whately.	67.00	Acres
Nine Mile Pond	MA34127	Wilbraham (formerly reported as 2000 segment: Nine Mile Pond MA36107).	33.00	Acres
Northampton Reservoir	MA34059	Whately.	80.00	Acres
Northfield Mountain Reservoir	MA34061	Erving.	237.00	Acres
Nurse Brook	MA34-59	Headwaters, west of Pratt Corner Road, Shutesbury to mouth at confluence with Adams Brook (in small "diversion pool" for Atkins Reservoir), Shutesbury.	1.20	Miles
Parsons Brook	MA34-66	Headwaters west of Sylvester Road, Northampton to mouth at confluence with Bassett Brook, Northampton.	3.10	Miles
Pine Island Lake	MA34069	Westhampton.	55.00	Acres
Plympton Brook Pond	MA34071	Wendell.	5.00	Acres
Potash Brook	MA34-12	Headwaters, perennial portion, Southampton to confluence with Manhan River, Southampton.	1.00	Miles
Raspberry Brook	MA34-22	From Massachusetts/Connecticut border to mouth at confluence with Connecticut River, Longmeadow.	1.80	Miles
Red Brook	MA34-92	Headwaters north of Maple Street, Southampton to mouth at confluence with Manhan River impoundment (Lyman Pond) backwater, Southampton.	2.60	Miles
Rice Brook	MA34-47	Headwaters, perennial portion, south of Burt Road, Westhampton to mouth at confluence with Sodom Brook, Westhampton.	1.10	Miles
Roberts Meadow Reservoir	MA34076	Northampton.	22.00	Acres



Category 3 waters listed alphabetically by major watershed
"No uses assessed"

Waterbody	AU_ID	Description	Size	Units
Sacket Brook	MA34-45	Headwaters, perennial portion, north of Southampton Road, Montgomery to mouth at confluence with Manhan River, Southampton.	2.10	Miles
Sawyer Ponds	MA34078	[North Basin] Northfield.	9.00	Acres
Sawyer Ponds	MA34079	[South Basin] Northfield.	12.00	Acres
Schneelock Brook	MA34-44	Headwaters, west of Newhouse Street, Springfield to mouth at confluence with South Branch Mill River, Springfield.	1.30	Miles
Schoolhouse Brook	MA34-43	Headwaters, southeast of Connor Reservoir, Holyoke to mouth at confluence with Goldine Brook, West Springfield.	3.10	Miles
Silver Lake	MA34084	Agawam.	9.00	Acres
Temple Brook	MA34-08	Headwaters, outlet Bradley Pond, Monson to mouth at confluence with Scantic River, Hampden.	3.60	Miles
Tighe Carmody Reservoir	MA34089	Southampton.	353.00	Acres
Tripple Brook	MA34-16	Headwaters, perennial portion, Southampton to mouth at confluence with Manhan River, Southampton.	1.00	Miles
Unnamed Tributary	MA34-31	Headwater, outlet Lake Warner, Hadley to mouth at confluence with Connecticut River, Hadley.	0.50	Miles
West Branch Mill River	MA34-39	From the confluence of Meekin Brook, Williamsburg to mouth at confluence with East Branch Mill River (forming headwaters Mill River), Williamsburg.	0.60	Miles
Deerfield				
Bog Pond	MA33003	Savoy.	35.00	Acres
Burnett Pond	MA33005	Savoy.	18.00	Acres
Fox Brook Upper Reservoir	MA33006	Colrain.	3.00	Acres
Goodnow Road Pond	MA33007	Buckland.	11.00	Acres
Hallockville Pond	MA33009	Plainfield/Hawley.	18.00	Acres
Highland Pond	MA33032	Greenfield.	2.00	Acres
Kinsman Brook	MA33-124	Headwaters north of Colrain Stage Road, Heath to confluence with Davenport Brook forming headwaters Taylor Brook, Heath.	1.80	Miles
Maynard Pond	MA33011	Greenfield.	3.00	Acres
McLeod Pond	MA33012	Colrain.	41.00	Acres
Mt. Brook Reservoir	MA33024	Colrain.	1.00	Acres
Newell Pond	MA33013	Greenfield.	0.90	Acres
North Brook	MA33-126	Perennial portion north of Harwood Road, Hawley to confluence with Chickley River, Hawley.	1.20	Miles
Papoose Lake	MA33023	Heath.	14.00	Acres
Phelps Brook Reservoir	MA33030	Monroe.	0.05	Acres
Rice Brook	MA33-125	Perennial portion east of Legate Hill Road, Charlemont to confluence with Deerfield River, Charlemont.	3.10	Miles
Tannery Pond	MA33020	Savoy.	0.50	Acres
Todd Brook	MA33-127	Headwaters east of Coon Hill, Charlemont to confluence with Deerfield River, Charlemont.	1.20	Miles
Unnamed Tributary	MA33-128	Unnamed tributary to Deerfield River known as 'Bear Swamp Outflow', from headwaters north of Tunnel Road, Rowe to confluence with Deerfield River, Rowe.	1.30	Miles
Upper Greenfield Reservoir	MA33021	Leyden.	6.00	Acres
Upper Highland Springs Reservoir	MA33025	Ashfield.	2.00	Acres
Upper Reservoir Bear Swamp	MA33026	Rowe.	108.00	Acres



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Waterbody	AU_ID	Description	Size	Units
Farmington				
Bradley Brook	MA31-37	Headwaters, perennial portion, west of Ridgeview Terrace, Southwick to MA/CT border, Southwick.	1.40	Miles
Buck River	MA31-38	Headwaters draining wetland just south of Morley Hillard Crank Road, Sandisfield to inlet Abbey Lake, Sandisfield (formerly part of segment MA31-12).	1.70	Miles
Cherry Brook	MA31-18	Headwaters, perennial portion, north of York Lake Road, Sandisfield to mouth at confluence with Sandy Brook, Sandisfield.	2.40	Miles
Cranberry Pond	MA31008	Tolland.	75.00	Acres
Creek Pond	MA31009	(Watson Pond) Otis.	52.00	Acres
Dimmock Brook Pond	MA31010	Otis.	15.00	Acres
Ellis Brook	MA31-35	Headwaters, outlet Shaughnessy Swamp, north of Route 57, Granville to mouth at confluence with Valley Brook, Granville.	0.80	Miles
Hall Pond Brook	MA31-34	Headwaters, outlet Hall Pond, Tolland to mouth at confluence with Babcock Brook (forming headwaters Hubbard Brook), Tolland.	2.30	Miles
Hayden Pond	MA31016	Otis.	28.00	Acres
Long Bow Lake	MA31019	Becket.	26.00	Acres
Lower Spectacle Pond	MA31020	Sandisfield.	70.00	Acres
North Branch Silver Brook	MA31-25	Headwaters, outlet Atwater Pond, Sandisfield to mouth at confluence with South Branch Silver Brook (forming headwaters Silver Brook), Sandisfield.	3.20	Miles
Potash Brook	MA31-36	Headwaters, outlet wetland east of North Lane, Granville to mouth at confluence with Valley Brook, Granville.	1.30	Miles
Royal Pond	MA31034	Otis/Monterey.	7.00	Acres
Silver Shield Pond	MA31054	Becket.	10.00	Acres
Unnamed Tributary	MA31-05	Unnamed tributary to Shaw Pond, source in wetlands southwest of Route 90 and east of Route 20, Becket to mouth at inlet Shaw Pond, Becket (excluding "gravel pit" pond).	1.30	Miles
Ward Pond	MA31047	Becket.	27.00	Acres
West Lake	MA31050	Sandisfield.	60.00	Acres
White Lily Pond	MA31051	Otis.	62.00	Acres
French				
Bartons Brook	MA42-08	Headwaters, outlet Stiles Reservoir, Leicester to mouth at inlet Greenville Pond West, Leicester.	1.10	Miles
Burncoat Pond	MA42007	Leicester/Spencer.	115.00	Acres
Easterbrook Pond	MA42017	Dudley.	5.00	Acres
Greenville Pond West	MA42022	Leicester.	6.00	Acres
Hayden Pond	MA42024	Dudley.	44.00	Acres
Henshaw Pond	MA42025	Leicester.	37.00	Acres
Hultered Pond	MA42072	Charlton (formerly reported as 2000 segment: Hultered Pond MA 41023).	4.00	Acres
Little Nugget Lake	MA42032	Charlton.	13.00	Acres
Little River	MA42-14	Outlet Buffum Pond, Oxford to mouth at confluence with French River, Oxford (formerly part of segment MA42-09).	1.30	Miles
Merino Pond	MA42036	Dudley.	75.00	Acres
Mine Brook	MA42-16	Headwaters (perennial portion), Webster to mouth at inlet Club Pond, Webster.	1.40	Miles
New Pond	MA42037	Dudley.	33.00	Acres



Category 3 waters listed alphabetically by major watershed
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Waterbody	AU_ID	Description	Size	Units
Nipmuck Pond	MA42039	Webster.	20.00	Acres
Peter Pond	MA42042	Dudley.	42.00	Acres
Putnam Pond	MA42046	Charlton.	20.00	Acres
Robinson Pond	MA42047	Oxford.	99.00	Acres
Slaters Pond	MA42053	Oxford.	105.00	Acres
Snow Pond	MA42054	Charlton.	1.00	Acres
Stiles Reservoir	MA42055	Spencer/Leicester.	309.00	Acres
Town Meadow Brook	MA42-02	Headwaters, outlet Dutton Pond, Leicester to mouth at inlet Greenville Pond, Leicester.	1.90	Miles
Unnamed Tributary	MA42-12	Unnamed tributary to Wellington Brook, perennial portion from Depot Road, Oxford to confluence with Wellington Brook, Oxford.	0.20	Miles
Unnamed Tributary	MA42-19	Unnamed tributary to the French River on the 1982 USGS quad as 'Lowes Brook', from the outlet of Lowes Pond, Oxford to mouth at confluence with French River, Oxford.	1.30	Miles
Unnamed Tributary	MA42-20	Unnamed tributary to South Fork locally known as 'Potters Brook', from outlet of Old Mill Pond Dam ((NAT ID: MA01833), Charlton to mouth at confluence with South Fork, Charlton.	0.90	Miles
Watson Millpond	MA42063	Spencer.	2.00	Acres
Wee Laddie Pond	MA42065	Charlton.	6.00	Acres
Housatonic				
Cady Brook	MA21-12	Headwaters, northwest corner Peru, to mouth at inlet of Windsor Reservoir, Hinsdale.	3.50	Miles
Card Pond	MA21015	West Stockbridge.	11.00	Acres
Cleveland Brook Reservoir	MA21019	Hinsdale.	155.00	Acres
Cookson Pond	MA21021	New Marlborough.	67.00	Acres
Crane Lake	MA21025	West Stockbridge.	27.00	Acres
East Indies Pond	MA21029	New Marlborough.	72.00	Acres
Farnham Reservoir	MA21033	Washington.	41.00	Acres
Greenwater Brook	MA21-27	Headwaters, outlet Greenwater Pond, Becket to mouth at confluence with Goose Pond Brook, Lee.	4.40	Miles
Hayes Pond	MA21051	Otis.	46.00	Acres
Mill Pond	MA21069	Egremont.	10.00	Acres
Muddy Brook	MA21-50	East of Monument Valley Road, Great Barrington from outlet small unnamed impoundment to inlet of unnamed impoundment upstream of Barbieri Dam (NAT ID# MA00039), Great Barrington.	0.80	Miles
Secum Brook	MA21-66	Headwaters, perennial portion, west of Bailey Road, Lanesborough to mouth at inlet Pontoosuc Lake, Lanesborough.	4.70	Miles
Seekonk Brook	MA21-22	Headwaters, outlet of small impoundment east of West Road, Alford to mouth at confluence with the Green River, Great Barrington.	4.80	Miles
Upper Goose Pond	MA21110	Lee/Tyringham.	55.00	Acres
Upper Sackett Reservoir	MA21113	Hinsdale.	19.00	Acres
Windsor Reservoir	MA21119	Hinsdale/Windsor.	74.00	Acres
Hudson: Hoosic				
Hemlock Brook	MA11-09	Headwaters, perennial portion, south of Route 2 in the Taconic Trail State Park, Williamstown to mouth at confluence with the Hoosic River, Williamstown.	7.10	Miles
McDonald Brook	MA11-16	Source, southeast of Woodchuck Hill, Windsor to mouth at confluence with South Brook, Cheshire (includes former 1998 segment: McDonald Brook MA11-12).	3.00	Miles



Category 3 waters listed alphabetically by major watershed
"No uses assessed"

Waterbody	AU_ID	Description	Size	Units
Mt. Williams Reservoir	MA11010	North Adams.	46.00	Acres
Notch Reservoir	MA11011	North Adams.	12.00	Acres
Tunnel Brook	MA11-26	Headwaters, outlet small unnamed pond east of West Shaft Road, North Adams to mouth at confluence with Phillips Creek, North Adams.	1.70	Miles
Windsor Lake	MA11016	North Adams.	24.00	Acres
Ipswich				
Beaver Pond	MA92002	Beverly.	19.00	Acres
Black Brook	MA92-19	Outlet Cutler Pond, Hamilton to confluence with Ipswich River, Hamilton.	3.60	Miles
Bradford Pond	MA92005	North Reading.	14.00	Acres
Creighton Pond	MA92011	Middleton.	19.00	Acres
Eisenhaures Pond	MA92016	North Reading.	12.00	Acres
Elginwood Pond	MA92017	Peabody.	9.00	Acres
Emerson Brook Reservoir (Forest Street Pond)	MA92021	Middleton/North Reading.	196.00	Acres
Farnum Street Pond	MA92018	North Andover.	9.00	Acres
Fourmile Pond	MA92022	Boxford.	29.00	Acres
Idlewild Brook	MA92-24	Outlet of Pleasant Pond, Hamilton to confluence with Ipswich River, Hamilton.	1.10	Miles
Kimballs Pond	MA92027	Boxford.	8.00	Acres
Long Causeway Brook	MA92-20	Headwaters (excluding intermittent portion) near Boston & Maine Railroad, south of Pigeon Hill, Hamilton to confluence with Miles River, Hamilton/Ipswich.	1.00	Miles
Longham Reservoir	MA92030	Wenham/Beverly.	34.00	Acres
Middleton Pond	MA92039	Middleton.	129.00	Acres
Mile Brook	MA92-16	Headwaters, east of North Street, Topsfield to confluence with Ipswich River, Topsfield (includes Mile Brook Pond).	2.50	Miles
Nichols Brook	MA92-25	Headwaters (near Rowley Hill Street and Route 95 and Newburyport Turnpike) in Danvers, to confluence with the Ipswich River, Middleton (Middleton/Boxford town line).	2.40	Miles
Pierces Pond	MA92048	Peabody.	3.00	Acres
Putnamville Reservoir	MA92052	Danvers.	283.00	Acres
Salem Street Pond	MA92076	North Andover.	11.00	Acres
Spofford Pond	MA92060	Boxford.	28.00	Acres
Stiles Pond	MA92063	Boxford.	59.00	Acres
Sudden Pond	MA92064	North Andover.	5.00	Acres
Suntaug Lake	MA92065	Lynnfield/Peabody.	151.00	Acres
Swan Pond	MA92066	North Reading.	42.00	Acres
Towne Pond	MA92068	Boxford/North Andover.	23.00	Acres
Winona Pond	MA92077	Peabody.	92.00	Acres
Islands				
Great Point Pond	MA97-04	On Great Point, Nantucket.	0.01	Square Miles



Category 3 waters listed alphabetically by major watershed
"No uses assessed"

Waterbody	AU_ID	Description	Size	Units
Oyster Pond	MA97-13	Including Ripley Cove, Edgartown, Martha's Vineyard.	0.29	Square Miles
Roaring Brook	MA97-37	Headwaters, south of Tabor House Road, Chilmark to mouth at inlet Vineyard Sound, Chilmark.	1.50	Miles
Tiasquam River	MA97-35	From Warren Pond Dam to mouth at inlet of Town Cove of Tisbury Great Pond, Chilmark/West Tisbury, Martha's Vineyard.	0.01	Square Miles
Merrimack				
Bailey Pond	MA84003	Amesbury.	13.00	Acres
Beaver Brook	MA84B-05	Headwaters, outlet of "Wolf Swamp", Boxborough to inlet of Mill Pond, Littleton.	5.50	Miles
Bridge Meadow Brook	MA84A-34	Headwaters, north of Chestnut Road, Tyngsborough to inlet Flint Pond, Tyngsborough.	4.00	Miles
Cow Pond Brook	MA84A-41	Headwaters outlet Whitney Pond, Groton to mouth at inlet Upper Massapoag Pond, Groton.	2.30	Miles
Joint Grass Brook	MA84A-32	Headwaters, between Hollis Street and Hauk Swamp, Dunstable to the confluence with Salmon Brook, Dunstable.	3.20	Miles
Lawrence Brook	MA84A-20	Headwaters, Tyngsborough (excluding intermittent portion) to confluence with Merrimack River, Tyngsborough.	2.00	Miles
Martins Pond Brook	MA84A-19	Headwaters outlet Martins Pond, Groton to inlet Lost Lake, Groton.	2.30	Miles
Mill Pond	MA84039	West Newbury.	18.00	Acres
Reed Brook	MA84B-08	Headwaters, south of the West Street/Cowdry Hill Road intersection, Westford to the confluence with Stony Brook, Westford.	0.60	Miles
Salmon Brook	MA84A-33	Headwaters, outlet Lower Massapoag Pond, Dunstable to New Hampshire state line, Dunstable.	2.90	Miles
Unnamed Tributary	MA84A-38	(Locally known as Argilla Brook) Unnamed tributary to Johnson Creek (excluding intermittent portion) from Center Street, Groveland to confluence with Johnson Creek, Groveland.	1.30	Miles
Uptons Pond	MA84075	Tyngsborough.	6.00	Acres
Millers				
Bassett Pond	MA35002	New Salem.	26.00	Acres
Beaver Flowage Pond	MA35005	(Beaver Pond) Royalston.	38.00	Acres
Bents Pond	MA35006	Hubbardston.	28.00	Acres
Bowens Pond	MA35009	Wendell.	17.00	Acres
Cowee Pond	MA35013	Gardner.	18.00	Acres
Crystal Lake	MA35014	Gardner.	142.00	Acres
Davenport Pond	MA35015	Petersham/Athol.	30.00	Acres
East Templeton Pond	MA35022	Templeton.	9.00	Acres
Greenwood Pond	MA35025	Westminster.	27.00	Acres
Hastings Pond	MA35028	Warwick.	18.00	Acres
Kendall Pond	MA35034	Gardner.	22.00	Acres
Lake Mattawa	MA35112	Orange.	112.00	Acres
Lake Watatic	MA35095	Ashburnham.	133.00	Acres
Little Pond	MA35037	Royalston.	10.00	Acres
Lower Naukeag Lake	MA35041	Ashburnham.	295.00	Acres
Minott Pond	MA35046	Westminster.	8.00	Acres
Minott Pond South	MA35045	Westminster.	27.00	Acres



Category 3 waters listed alphabetically by major watershed
"No uses assessed"

Waterbody	AU_ID	Description	Size	Units
North Spectacle Pond	MA35052	New Salem.	43.00	Acres
Packard Pond	MA35053	Orange.	43.00	Acres
Partridgeville Pond	MA35057	Templeton.	38.00	Acres
Perley Brook Reservoir	MA35059	Gardner.	55.00	Acres
Phillipston Reservoir	MA35060	Phillipston/Athol.	20.00	Acres
Ramsdall Pond	MA35062	Gardner.	16.00	Acres
Reservoir No. 2	MA35064	Phillipston/Athol (Secret Lake).	48.00	Acres
Riceville Pond	MA35065	Athol/Petersham.	61.00	Acres
Richards Reservoir	MA35067	Warwick.	21.00	Acres
Royalston Road Pond	MA35071	Orange.	5.00	Acres
Sheomet Lake	MA35074	Warwick.	30.00	Acres
South Spectacle Pond	MA35081	New Salem.	38.00	Acres
Sportsmans Pond	MA35082	Athol.	93.00	Acres
Sunset Lake	MA35086	Ashburnham/Winchendon.	274.00	Acres
Tully Pond	MA35089	Orange.	70.00	Acres
Wallace Pond	MA35092	Ashburnham.	46.00	Acres
Ward Pond	MA35093	Athol.	6.00	Acres
Wheeler Pond	MA35097	Warwick.	28.00	Acres
Wickett Pond	MA35102	Wendell.	30.00	Acres
Wrights Reservoir	MA35104	Gardner/Westminster.	131.00	Acres
Mount Hope Bay (Shore)				
Cook Pond	MA61001	Fall River, MA/Tiverton, RI.	157.00	Acres
South Watuppa Pond	MA61006	Fall River/Westport.	1,473.00	Acres
Narragansett Bay (Shore)				
Beaverdam Brook	MA53-10	Headwaters, southeast of Chestnut Street, Rehoboth to confluence with Palmer River, Rehoboth.	2.90	Miles
Rumney Marsh Brook	MA53-09	Headwaters, east of Locust Avenue, Rehoboth to confluence with Beaverdam Brook, Rehoboth.	1.30	Miles
Nashua				
Ashby Reservoir	MA81001	Ashby.	36.00	Acres
Asnebumskit Pond	MA81002	Paxton.	44.00	Acres
Barrett Pond	MA81162	Leominster.	7.00	Acres
Bartlett Pond	MA81009	Leominster.	23.00	Acres
Bayberry Hill Brook	MA81-68	Headwaters, outlet small unnamed pond north of Bailey Road, Townsend to mouth at confluence with Squannacook River, Townsend.	2.10	Miles
Bixby Reservoir	MA81010	Townsend.	21.00	Acres
Cold Spring Brook	MA81-82	Headwaters, west of Old Mill Road (on the western side of railroad tracks), Harvard to mouth at confluence with Bowers Brook, Harvard.	1.20	Miles
Coon Tree Pond	MA81168	Pepperell.	29.00	Acres
East Waushacum Pond	MA81035	Sterling.	181.00	Acres
Fitchburg Reservoir	MA81043	Ashby.	150.00	Acres



Category 3 waters listed alphabetically by major watershed
"No uses assessed"

Waterbody	AU_ID	Description	Size	Units
Goodridge Brook	MA81-66	Headwaters, outlet impoundment at Old Ice Pond Dam (NATID: MA01560), Lancaster to mouth at confluence with Nashua River ("South Branch Nashua River"), Lancaster.	1.80	Miles
Heald Pond	MA81056	Pepperell.	28.00	Acres
Houghton Brook	MA81-55	Headwaters, south of Merrill Road, Sterling to mouth at confluence with Stillwater River, Sterling.	1.50	Miles
Hy-Crest Pond	MA81060	Sterling.	104.00	Acres
Kendall Reservoir	MA81062	Holden.	179.00	Acres
Lincoln Pond	MA81070	Ashburnham.	31.00	Acres
Long Pond	MA81073	Ayer/Groton.	46.00	Acres
Lovell Reservoir	MA81074	Fitchburg.	35.00	Acres
Massapoag Pond	MA81080	Lunenburg.	64.00	Acres
Meetinghouse Pond	MA81083	Westminster.	151.00	Acres
Mirror Lake	MA81084	Fitchburg.	6.00	Acres
Morse Reservoir	MA81086	Leominster.	15.00	Acres
Muschopauge Pond	MA81089	Rutland.	61.00	Acres
Notown Reservoir	MA81092	Leominster.	241.00	Acres
Pine Hill Reservoir	MA81102	Paxton/Holden/Rutland.	336.00	Acres
Quinapoxet Reservoir	MA81108	Holden/Princeton.	266.00	Acres
Reedy Meadow Brook	MA81-64	Headwaters, Reedy Meadow, Groton to mouth at confluence with Nashua River, Pepperell.	2.30	Miles
Round Meadow Pond	MA81114	Westminster.	54.00	Acres
Scott Reservoir	MA81119	Fitchburg.	33.00	Acres
Snows Millpond	MA81127	Fitchburg/Westminster.	38.00	Acres
Streeter Pond	MA81136	Paxton/Holden.	18.00	Acres
Unnamed Tributary	MA81-98	Unnamed tributary to the North Nashua River, headwaters east of Westminster Hill Road, Fitchburg to mouth at confluence with the North Nashua River, Fitchburg (approximately 900 feet culverted between Overland and Westminster streets).	0.90	Miles
Vinton Pond	MA81145	Townsend.	16.00	Acres
Whitmanville Reservoir	MA81109	Westminster/Ashburnham.	107.00	Acres
Wilder Brook	MA81-43	Headwaters west of Osgood Road, Sterling to mouth at confluence with Stillwater River, Sterling.	2.30	Miles
Winnekeag Lake	MA81157	Ashburnham.	113.00	Acres
Wright Pond	MA81159	[West Basin] Ashby.	21.00	Acres
North Coastal				
Alewife Brook	MA93-26	Headwaters, perennial portion just north of B&M Railroad, Rockport to mouth at inlet Babson Reservoir, Gloucester.	1.00	Miles
Babson Reservoir	MA93001	Gloucester.	40.00	Acres
Beck Pond	MA93003	Hamilton.	35.00	Acres
Birch Pond	MA93004	Saugus/Lynn.	80.00	Acres
Breeds Pond	MA93006	Lynn.	195.00	Acres
Browns Pond	MA93008	Peabody.	25.00	Acres
Buswell Pond	MA93009	Gloucester.	4.00	Acres



Category 3 waters listed alphabetically by major watershed
"No uses assessed"

Waterbody	AU_ID	Description	Size	Units
Cedar Pond	MA93013	Peabody.	34.00	Acres
Chubb Creek	MA93-63	Tidal portion south of Route 127, Beverly/Manchester to mouth at confluence with Salem Sound, Beverly/Manchester.	0.01	Square Miles
Chubb Creek	MA93-64	Headwaters northwest of northern end of Leather Lane, Beverly to salt water portion south of Route 127, Beverly/Manchester.	0.60	Miles
Coy Pond	MA93016	Wenham.	23.00	Acres
Crystal Lake	MA93018	Wakefield/Stoneham.	79.00	Acres
Fernwood Lake	MA93022	Gloucester.	25.00	Acres
Goose Cove Reservoir	MA93093	Gloucester.	58.00	Acres
Gravelly Pond	MA93028	Hamilton.	50.00	Acres
Little River	MA93-66	Headwaters outlet Lily Pond, Gloucester to salt water portion north at Route 133, Gloucester.	0.50	Miles
Little River	MA93-67	From salt water portion north at Route 133, Gloucester to mouth at confluence with Annisquam River, Gloucester.	0.19	Square Miles
Mill Pond	MA93-60	East of Route 127, Gloucester (formerly reported as 2014 lake segment: Mill Pond MA93050).	0.03	Square Miles
Niles Pond	MA93052	Gloucester.	34.00	Acres
Quarry Reservoir	MA93053	Rockport.	7.00	Acres
Round Pond	MA93063	Hamilton.	37.00	Acres
Rum Rock Lake	MA93064	Rockport.	10.00	Acres
Spring Pond	MA93073	[South Basin] Peabody/Lynn/Salem.	67.00	Acres
Spring Pond	MA93074	[North Basin] Peabody.	17.00	Acres
Unnamed Tributary	MA93-27	Headwaters, outlet Babson Reservoir, Gloucester to culvert outlet into saltwater wetland northwest of Bertoni Road, Gloucester (portion culverted).	0.40	Miles
Upper Pond	MA93083	Saugus.	13.00	Acres
Walker Creek	MA93-62	From tidal portion approximately 460 feet north of Route 133, Gloucester to mouth at confluence with Essex Bay, Essex.	0.09	Square Miles
Wallace Pond	MA93085	Gloucester.	22.00	Acres
Parker				
Central Street Pond	MA91003	Rowley.	3.00	Acres
Crane Pond	MA91004	Groveland.	22.00	Acres
Dow Brook Reservoir	MA91005	Ipswich.	16.00	Acres
Little Crane Pond	MA91007	West Newbury.	4.00	Acres
Quills Pond	MA91011	Newbury.	2.00	Acres
Sperrys Pond	MA91013	Boxford.	26.00	Acres
Wilson Pond	MA91017	Rowley.	5.00	Acres
Quinebaug				
Lake George	MA41016	Wales.	93.00	Acres
Leadmine Brook	MA41-21	Headwaters, outlet Leadmine Pond, Sturbridge to the state line, Sturbridge, MA/Union, CT.	2.50	Miles
Leadmine Pond	MA41027	Sturbridge.	52.00	Acres



Category 3 waters listed alphabetically by major watershed
"No uses assessed"

Waterbody	AU_ID	Description	Size	Units
Lebanon Brook	MA41-11	From the state line, Southbridge, MA/Woodstock, CT, to mouth at confluence with the Quinebaug River, Southbridge.	4.70	Miles
Little Alum Pond	MA41029	Brimfield.	73.00	Acres
Mcintyre Pond	MA41031	Charlton.	11.00	Acres
Monson Road Pond	MA41059	Wales.	4.00	Acres
Mountain Brook	MA41-18	Headwaters, east of Steerage Rock Road (excluding intermittent portion), Brimfield to mouth at confluence with Mill Brook, Brimfield.	1.90	Miles
New Boston Road Pond	MA41035	Sturbridge.	13.00	Acres
No. 3 Reservoir	MA41038	Southbridge.	23.00	Acres
No. 4 Reservoir	MA41039	Southbridge.	69.00	Acres
No. 5 Reservoir	MA41040	Southbridge.	30.00	Acres
Prindle Lake	MA41043	Charlton.	75.00	Acres
Tufts Branch	MA41-10	Headwaters, north of Dudley-Southbridge Road, Dudley to the state line, Dudley, MA/Thompson, CT.	2.80	Miles
Unnamed Tributary	MA41-25	Unnamed tributary to Tufts Branch, headwaters, outlet Wielock Pond, Dudley to mouth at confluence with Tufts Branch, Dudley.	0.20	Miles
Unnamed Tributary	MA41-27	Unnamed tributary to Mill Brook, headwaters south of East Hill Road, Brimfield to mouth at confluence with Mill Brook, Brimfield.	1.70	Miles
Wales Brook	MA41-08	Headwaters, outlet Lake George, Wales to mouth at confluence with Mill Brook, Brimfield.	5.20	Miles
Wielock Pond	MA41056	Dudley.	6.00	Acres
Shawsheen				
Bakers Meadow Pond	MA83002	Andover.	21.00	Acres
Fawn Lake	MA83004	Bedford.	12.00	Acres
Hussey Brook Pond	MA83008	Andover.	0.50	Acres
Pond Street Pond	MA83021	Billerica (unnamed pond west of Pond Street).	4.00	Acres
Richardson Pond North	MA83020	Billerica/Tewksbury.	46.00	Acres
Round Pond	MA83018	Tewksbury.	25.00	Acres
Unnamed Tributary	MA83-16	Unnamed tributary to Shawsheen River also known as "Fosters Brook" - outlet Fosters Pond, Andover through River Street Pond to confluence with Shawsheen River at Lowell Junction Pond, Andover.	1.00	Miles
South Coastal				
Arnold School Pond	MA94004	Pembroke.	12.00	Acres
Beaver Dam Brook	MA94-65	Headwaters east of Long Island Pond, Plymouth to mouth at inlet Bartlett Pond, Plymouth (through former 2016 segment: Beaver Dam Pond MA94006).	2.60	Miles
Black Jimmy Pond	MA94008	Plymouth.	9.00	Acres
Bound Brook Pond	MA94017	Norwell.	21.00	Acres
Elbow Pond	MA94035	Plymouth.	21.00	Acres
Furnace Brook	MA94-52	Headwaters outlet Soules Pond, Kingston to mouth at confluence with Jones River, Kingston.	0.90	Miles
Governor Winslow House Pond	MA94047	Marshfield.	23.00	Acres
Great Sandy Bottom Pond	MA94053	Pembroke.	103.00	Acres



Category 3 waters listed alphabetically by major watershed
"No uses assessed"

Waterbody	AU_ID	Description	Size	Units
Halls Brook	MA94-57	Tidal portion east of Maple Street, Kingston to mouth at confluence with Jones River, Kingston.	0.003	Square Miles
Harrobs Corner Bog Pond	MA94061	Plympton.	20.00	Acres
Hobomock Pond	MA94177	Pembroke.	13.00	Acres
Indian Pond	MA94072	Kingston/Plympton.	64.00	Acres
Island Creek	MA94-47	Tidal portion, Duxbury to mouth at Kingston Bay, Duxbury.	0.01	Square Miles
Island Pond	MA94076	[south of locality of South Pond] Plymouth.	12.00	Acres
Keene Pond	MA94079	Duxbury.	11.00	Acres
Little Sandy Bottom Pond	MA94085	Pembroke.	56.00	Acres
Maquan Pond	MA94096	Hanson.	45.00	Acres
Musquashcut Brook	MA94-64	Headwaters outlet Musquashcut Pond, Scituate to mouth at confluence with The Gulf, Scituate.	0.02	Square Miles
North Hill Marsh Pond	MA94109	Duxbury.	43.00	Acres
Pine Lake	MA94120	Duxbury.	22.00	Acres
Pine Street Pond	MA94121	Duxbury.	14.00	Acres
Pudding Brook	MA94-60	Headwaters, perennial portion, east of Hemlock Drive, Pembroke to inlet of Reservoir, southwest of Pleasant Street, Pembroke.	2.00	Miles
Round Pond	MA94131	Duxbury.	7.00	Acres
Shallow Pond	MA94140	Plymouth.	19.00	Acres
Ship Pond	MA94142	Plymouth.	11.00	Acres
Smelt Brook	MA94-56	Tidal portion north of Route 3A, Kingston to mouth at confluence with Jones River, Kingston.	0.01	Square Miles
South Triangle Pond	MA94149	Plymouth.	17.00	Acres
Unnamed Tributary	MA94-43	Unnamed tributary to Great Herring Pond, headwaters outlet Little Herring Pond, Plymouth to mouth at inlet of Great Herring Pond, Plymouth.	0.60	Miles
Unnamed Tributary	MA94-45	Unnamed tributary to Duxbury Bay, source north of Route 3/Cherry Street intersection, Plymouth to mouth at inlet of Duxbury Bay, Plymouth.	1.10	Miles
Unnamed Tributary	MA94-62	Unnamed tributary to Bluefish River (locally considered a portion of Bluefish River), tidal portion north of Harrison Street, Duxbury to mouth at confluence with Bluefish River, Duxbury.	0.002	Square Miles
West Chandler Pond	MA94170	Pembroke.	10.00	Acres
Winslow Cemetary Pond	MA94172	Marshfield.	6.00	Acres
Wright Pond	MA94174	Duxbury.	30.00	Acres
Taunton				
Assawompset Pond	MA62003	Lakeville/Middleborough.	2,034.00	Acres
Beaumont Pond	MA62009	Foxborough.	24.00	Acres
Beaver Brook	MA62-30	Headwaters, perennial portion, just west of Bay Road, Easton to mouth at inlet of Old Pond, Easton.	1.40	Miles
Briggs Pond	MA62021	Sharon.	19.00	Acres
Canoe River	MA62-65	From outlet of Beaumont Pond, Foxborough to inlet of Hartwell School Pond, Mansfield (formerly part of 2014 segment: Canoe River MA62-27).	3.80	Miles
Carpenter Pond	MA62032	Foxborough.	29.00	Acres



Category 3 waters listed alphabetically by major watershed
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Waterbody	AU_ID	Description	Size	Units
Cedar Swamp River	MA62-44	Headwaters south of Freetown Street, Lakeville to Lakeville/Freetown corporate boundary (stream name changes to Assonet River at Lakeville/Freetown corporate boundary).	5.30	Miles
Chaffin Reservoir	MA62035	Pembroke.	13.00	Acres
Chartley Pond	MA62038	Norton/Attleboro.	57.00	Acres
Cobb Brook	MA62-43	Headwaters south of Dunbar Street (in Crapo Bog), Taunton to mouth at confluence with the Taunton River, Taunton (approximately 0.1mile culverted at mouth).	3.50	Miles
Cocasset Lake	MA62043	Foxborough.	32.00	Acres
Cooper Pond	MA62046	Carver.	22.00	Acres
Cotley River	MA62-41	From outlet of cranberry bog south of Seekell Street, Taunton to mouth at confluence with the Taunton River, Taunton.	5.70	Miles
Coweaset Brook	MA62-22	Headwaters, perennial portion, southwest of Route24/Route 123 interchange (north of Mill Street), Brockton to mouth at confluence with Hockomock River, West Bridgewater.	3.90	Miles
Cross Pond	MA62052	Brockton.	2.00	Acres
Cross Street Pond	MA62053	Bridgewater.	27.00	Acres
Elm Street Pond	MA62066	Halifax/Hanson.	19.00	Acres
Furnace Lake	MA62076	Foxborough.	15.00	Acres
Glue Factory Pond	MA62078	Foxborough (formerly part of 2014 segment: Rumford River MA62-39).	7.00	Acres
Great Quittacas Pond	MA62083	Lakeville/Middleborough/Rochester.	1,125.00	Acres
Hartwell School Pond	MA62086	Mansfield (formerly part of 2014 segment: Canoe River MA62-27).	8.00	Acres
Johns Pond	MA62096	Carver.	21.00	Acres
Leach Pond	MA62103	Easton/Sharon.	111.00	Acres
Little Cedar Swamp	MA62106	Easton.	91.00	Acres
Little Quittacas Pond	MA62107	Lakeville/Rochester.	295.00	Acres
Long Pond River	MA62-74	Headwaters outlet Long Pond, Lakeville to mouth at inlet Assawompsett Pond, Lakeville.	0.40	Miles
Lovett Brook	MA62-46	Headwaters, perennial portion, north of Oak Street, Brockton to mouth at inlet Elis Brett Pond, Brockton.	1.50	Miles
Meadow Brook Pond	MA62113	Norton.	13.00	Acres
Muddy Cove Brook	MA62-58	Headwaters, south of Hart Street, Dighton to inlet Muddy Cove Brook Pond, Dighton (formerly part of 2014 segment: Muddy Cove Brook MA62-52 [MA62-23 (2004)]).	1.40	Miles
Muddy Pond	MA62126	Halifax.	13.00	Acres
Muddy Pond	MA62233	Kingston (formerly reported as 2004 segment: Muddy Pond MA94104).	42.00	Acres
Mulberry Meadow Brook	MA62-31	Headwaters, outlet New Pond, Easton to mouth at inlet of Winnecunnet Pond, Norton (through former 2014 segments: Ward Pond MA62203 and Reservoir MA62158).	4.60	Miles
Mullein Hill Chapel Pond	MA62127	Lakeville.	23.00	Acres
North Center Street Pond	MA62132	Carver.	12.00	Acres
Plymouth Street Pond	MA62141	Halifax/East Bridgewater.	165.00	Acres
Pocksha Pond	MA62145	Lakeville/Middleborough.	592.00	Acres
Poquoy Pond	MA62147	Lakeville.	10.00	Acres
Prospect Hill Pond	MA62149	Taunton.	42.00	Acres
Puds Pond	MA62151	Sharon/Easton.	23.00	Acres



Category 3 waters listed alphabetically by major watershed
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Waterbody	AU_ID	Description	Size	Units
Queset Brook	MA62-68	From outlet Longwater Pond, Easton to mouth at confluence with Coweaset Brook, West Bridgewater (formerly part of 2014 segment: Queset Brook MA62-21).	3.30	Miles
Robbins Pond	MA62162	East Bridgewater.	124.00	Acres
Route One Pond, West	MA62165	Wrentham.	10.00	Acres
Snake River	MA62-28	Headwaters, outlet Winnecunnet Pond, Norton to mouth at inlet of Lake Sabbatia, Taunton.	3.30	Miles
Sunset Lake	MA62184	Foxborough.	13.00	Acres
The Reservoir	MA62189	Lakeville.	23.00	Acres
Thurston Street Pond	MA62192	Wrentham.	7.00	Acres
Tispaquin Pond	MA62195	Middleborough.	195.00	Acres
Upper Leach Pond	MA62123	(Mountain Street Pond) Sharon.	28.00	Acres
Weir Village South Pond	MA62207	northeast of the railroad tracks west of Linden Street, Taunton.	14.00	Acres
Whiteville Pond	MA62211	Mansfield.	14.00	Acres
Winnetuxet River	MA62-24	Headwaters, confluence of Muddy Pond Brook and Doten Brook, Carver to mouth at confluence with the Taunton River, Halifax.	12.10	Miles
Wolomolopoag Pond	MA62216	Sharon.	13.00	Acres
Ten Mile				
Greenwood Lake	MA52017	Mansfield/North Attleborough.	96.00	Acres
Hoppin Hill Reservoir	MA52021	North Attleborough.	22.00	Acres
Manchester Pond Reservoir	MA52026	Attleboro.	238.00	Acres
Westfield				
Abbott Brook	MA32-62	Headwaters (perennial portion), north of Abbott Hill Road, Chester to mouth at confluence with West Branch Westfield River, Chester.	2.50	Miles
Arm Brook	MA32-58	Headwaters (perennial portion), south of Summit Lock Road, Westfield to inlet unnamed pond west of Barbara Street, Westfield.	1.70	Miles
Ashley Cutoff	MA32001	Holyoke.	31.00	Acres
Ashley Pond	MA32002	Holyoke.	133.00	Acres
Barry Brook	MA32-57	Headwaters, outlet Snake Pond, Holyoke to mouth at confluence with Trask Brook (forming headwaters Bush Brook), Westfield.	2.60	Miles
Borden Brook Reservoir	MA32011	Granville/Blandford.	211.00	Acres
Bush Brook	MA32-56	Headwaters, confluence of Barry and Trask brooks, east of Sherwood Avenue, Westfield to mouth at confluence with Pond Brook, Westfield.	0.70	Miles
Clear Pond	MA32077	Holyoke.	10.00	Acres
Cobble Mountain Reservoir	MA32018	Blandford/Granville/Russell.	1,034.00	Acres
Connor Reservoir	MA32024	Holyoke.	17.00	Acres
Cook Brook	MA32-38	Headwaters, outlet small unnamed pond west of the intersection of Gorge and Granville roads, Westfield to mouth at confluence with Little River, Westfield.	2.00	Miles
Cooley Lake	MA32026	Granville.	66.00	Acres
Crooked Pond	MA32028	Plainfield.	34.00	Acres
Damon Pond	MA32029	Chesterfield/Goshen.	77.00	Acres
Garnet Lake	MA32037	Peru.	17.00	Acres



**Category 3 waters listed alphabetically by major watershed
"No uses assessed"**

Waterbody	AU_ID	Description	Size	Units
Geer Brook	MA32-43	Headwaters, outlet Garnet Lake, Peru to mouth at confluence with Factory Brook, Middlefield.	1.80	Miles
Granville Reservoir	MA32038	Granville.	74.00	Acres
Hammond Pond	MA32040	Goshen.	38.00	Acres
Kellog Brook	MA32-55	Headwaters (perennial portion), east of College Highway (Route 202), Southwick to mouth at confluence with Great Brook, Westfield.	2.80	Miles
Little River	MA32-35	Source, outlet of Cobble Mountain Reservoir, Russell to Springfield Water Works Intake Dam (NATID: MA00708) northwest of Gorge Road, Russell (formerly part of segment MA32-26).	2.60	Miles
Littleville Lake	MA32046	Chester/Huntington.	252.00	Acres
McLean Reservoir	MA32050	Holyoke.	55.00	Acres
North Railroad Pond	MA32053	Holyoke.	9.00	Acres
Norwich Pond	MA32054	Huntington.	116.00	Acres
Robin Hood Lake	MA32057	Becket.	63.00	Acres
Rudd Pond	MA32060	Becket.	72.00	Acres
Russell Pond	MA32061	Russell.	82.00	Acres
Scout Pond	MA32063	Chesterfield.	37.00	Acres
Steep Bank Brook	MA32-53	Headwaters (perennial portion), northeast of Bates Road, Windsor to mouth at confluence with Westfield River, Windsor.	1.00	Miles
Westfield Reservoir	MA32074	Montgomery.	40.00	Acres
Wright Pond	MA32078	Holyoke.	28.00	Acres
Yokum Pond	MA32079	Becket.	98.00	Acres

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Category 4a waters listed alphabetically by major watershed
"TMDL is completed"

Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Blackstone						
Dorothy Pond	MA51039	Millbury.	133.00	Acres	(Brittle Naiad, Najas Minor*)	
					(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					Turbidity	379
Eddy Pond	MA51043	Auburn.	103.00	Acres	(Aquatic Plants (Macrophytes)*)	
					(Non-Native Aquatic Plants*)	
					Nutrient/Eutrophication Biological Indicators	2382
Flint Pond	MA51050	[North Basin] Shrewsbury.	93.00	Acres	(Aquatic Plants (Macrophytes)*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					Nutrient/Eutrophication Biological Indicators	444
Flint Pond	MA51188	[South Basin] Shrewsbury/Grafton/Worcester.	173.00	Acres	Turbidity	444
					(Aquatic Plants (Macrophytes)*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
Green Hill Pond	MA51056	Worcester.	29.00	Acres	Nutrient/Eutrophication Biological Indicators	444
					Turbidity	498
Howe Reservoirs	MA51071	[West Basin] Millbury.	7.00	Acres	(Aquatic Plants (Macrophytes)*)	
					Nutrient/Eutrophication Biological Indicators	550
Indian Lake	MA51073	Worcester.	187.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					Dissolved Oxygen	2323
					Harmful Algal Blooms	2323
					Nutrient/Eutrophication Biological Indicators	2323
Jordan Pond	MA51078	Shrewsbury.	18.00	Acres	Harmful Algal Blooms	2385
					Turbidity	2385



Category 4a waters listed alphabetically by major watershed
"TMDL is completed"

Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Leesville Pond	MA51087	Auburn/Worcester.	34.00	Acres	(Fanwort*)	
					Dissolved Oxygen	671
					Phosphorus, Total	671
Pondville Pond	MA51120	Auburn/Millbury.	36.00	Acres	(Fanwort*)	
					Algae	938
Shirley Street Pond	MA51196	Shrewsbury.	19.00	Acres	(Aquatic Plants (Macrophytes)*)	
					(Water Chestnut*)	
					Nutrient/Eutrophication Biological Indicators	2392
Southwick Pond	MA51157	Leicester/Paxton.	43.00	Acres	(Aquatic Plants (Macrophytes)*)	
					Nutrient/Eutrophication Biological Indicators	2390
Waite Pond	MA51170	Leicester.	49.00	Acres	Mercury in Fish Tissue	33880
Boston Harbor: Mystic						
Unnamed Tributary	MA71-13	Unnamed tributary locally known as 'Meetinghouse Brook', from emergence south of Route 16/east of Winthrop Street, Medford to confluence with the Mystic River, Medford. (brook not apparent on 1985 Boston North USGS quad - 2005 orthophotos used to delineate stream).	0.10	Miles	Escherichia Coli (E. Coli)	R1_MA_2019_01
Winn Brook	MA71-09	Headwaters near Juniper Road and the Belmont Hill School, Belmont to confluence with Little Pond, Belmont (portions culverted underground).	1.40	Miles	(Physical substrate habitat alterations*)	
					Escherichia Coli (E. Coli)	R1_MA_2019_01
Boston Harbor: Neponset						
Massapoag Lake	MA73030	Sharon.	389.00	Acres	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Pettee Pond	MA73036	Walpole/Westwood.	10.00	Acres	Mercury in Fish Tissue	42408
Ponkapoag Pond	MA73043	Canton/Randolph.	214.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	42409
Ponkapog Brook	MA73-27	Headwaters, outlet of Ponkapoag Pond, Canton to confluence with Neponset River, Canton.	3.10	Miles	Escherichia Coli (E. Coli)	2592
					Fecal Coliform	2592
Reservoir Pond	MA73048	Canton.	251.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	42400



**Category 4a waters listed alphabetically by major watershed
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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Unnamed Tributary	MA73-31	Headwaters, outlet of Massapoag Lake, Sharon to mouth at inlet of Hammer Shop Pond, Sharon (not depicted on 1987 Mansfield USGS quad).	0.30	Miles	Fecal Coliform	2592
Willet Pond	MA73062	Walpole/Westwood/Norwood (at northern end, includes former 2008 segment: Unnamed Tributary MA73-13).	205.00	Acres	Mercury in Fish Tissue	33880
Boston Harbor: Weymouth & Weir						
Mill River	MA74-04	Headwaters, west of Route 18 and south of Randolph Street, Weymouth to inlet Whitmans Pond, Weymouth (portions culverted underground).	3.40	Miles	(Fish Passage Barrier*)	
					Escherichia Coli (E. Coli)	R1_MA_2019_01
					Fecal Coliform	R1_MA_2019_01
Old Swamp River	MA74-03	Headwaters just west of Pleasant Street and north of Liberty Street, Rockland to inlet Whitmans Pond, Weymouth.	4.60	Miles	(Fish Passage Barrier*)	
					Escherichia Coli (E. Coli)	R1_MA_2019_01
					Fecal Coliform	R1_MA_2019_01
Buzzards Bay						
Back River	MA95-47	Estuarine portion, west of County Road, Bourne to confluence with Phinneys Harbor (excluding Eel Pond), Bourne.	0.09	Square Miles	Fecal Coliform	36172
Bread and Cheese Brook	MA95-58	Headwaters north of Old Bedford Road, Westport to confluence with East Branch Westport River, Westport.	4.90	Miles	Enterococcus	36170
					Fecal Coliform	36170
Broad Marsh River	MA95-49	Headwaters in salt marsh south of Marion Road and Bourne Terrace, Wareham to confluence with the Wareham River, Wareham.	0.17	Square Miles	Fecal Coliform	36172
Buttonwood Brook	MA95-13	Headwaters, Oakdale Street, New Bedford to mouth at Apponagansett Bay, Dartmouth (excluding the approximately 0.2 miles through Buttonwood Park Pond segment MA95020).	3.60	Miles	Enterococcus	36170
					Escherichia Coli (E. Coli)	36170
					Fecal Coliform	36170
Cape Cod Canal	MA95-14	Waterway between Buzzards Bay and Cape Cod Bay, Bourne/Sandwich.	1.17	Square Miles	Fecal Coliform	36171
Cedar Island Creek	MA95-52	Estuarine portion southwest of the intersection of Parker Drive and Camardo Drive, Wareham to the mouth at Marks Cove, Wareham.	0.01	Square Miles	Fecal Coliform	36172
Crooked River	MA95-51	Estuarine portion east of Indian Neck Road, Wareham to the confluence with the Wareham River, Wareham.	0.04	Square Miles	Enterococcus	36172
					Fecal Coliform	36172
East Branch Westport River	MA95-40	Headwaters, outlet Noquochoke Lake, Dartmouth to Old County Road bridge, Westport (mileage includes length of braid).	2.40	Miles	Enterococcus	36170
					Fecal Coliform	36170
Eel Pond	MA95-48	Salt water pond that discharges to the Back River, Bourne.	0.03	Square Miles	Fecal Coliform	36172
Great Sippewisset Creek	MA95-23	From the outlet of Beach Pond in Great Sippewisset Marsh, Falmouth to the mouth at Buzzards Bay, Falmouth (including Quahog Pond and the unnamed tributary from the outlet of Fresh Pond).	0.03	Square Miles	Fecal Coliform	36172
Harbor Head	MA95-46	The semi-enclosed body of water south of the confluence with West Falmouth Harbor, south of Chappaquoit Road, Falmouth.	0.02	Square Miles	Estuarine Bioassessments	34284
					Fecal Coliform	36172



**Category 4a waters listed alphabetically by major watershed
"TMDL is completed"**

Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Hiller Cove	MA95-10	The water landward of a line drawn between Joes Point, Mattapoissett and the second boat dock northeast of Hiller Cove Lane, Mattapoissett.	0.04	Square Miles	Fecal Coliform	36172
Little Bay	MA95-64	From the confluence with the Nasketucket River, Fairhaven south to the confluence with Nasketucket Bay at a line from the southernmost tip of Mirey Neck, Fairhaven (~latitude 41.625702, ~longitude 70.854045) to a point of land near Shore Drive (~latitude 41.621994, ~longitude 70.855415), Fairhaven.	0.33	Square Miles	Fecal Coliform	36172
Little Sippewisset Marsh	MA95-24	From headwaters north of Sippewisset Road and east of Maker Lane, Falmouth to the mouth at Buzzards Bay southwest of end of Saconeset Road, Falmouth.	0.02	Square Miles	Fecal Coliform	36172
Long Pond	MA95097	Rochester.	32.00	Acres	Mercury in Fish Tissue	33880
Mattapoissett River	MA95-60	From the Mattapoissett River Dam (#MA02447) at Fairhaven Road (Route 6), Mattapoissett to the mouth at Mattapoissett Harbor, Mattapoissett.	0.04	Square Miles	Fecal Coliform	36172
Nasketucket Bay	MA95-65	From the confluence with Little Bay, Fairhaven to Buzzards Bay along Causeway Road, Fairhaven (on the south) and along a line from the southern tip of Brant Island, Mattapoissett to the eastern tip of West Island, Fairhaven.	3.69	Square Miles	Fecal Coliform	36172
Oyster Pond	MA95927	west of Route 28A, Falmouth.	0.01	Square Miles	Dissolved Oxygen	34331
					Estuarine Bioassessments	34331
Phinneys Harbor	MA95-15	From the confluence with the Back River, to the mouth at Buzzards Bay (demarcated by a line from the southeastern point of Mashnee Island to the northwestern point of Tobys Island), Bourne (includes the "north facing embayment of Tobys Island").	0.72	Square Miles	Estuarine Bioassessments	35069
					Fecal Coliform	36172
					Nitrogen, Total	35069
Pocasset River	MA95-16	From the outlet of Mill Pond, Bourne to the mouth at Buzzards Bay, Bourne.	0.05	Square Miles	Fecal Coliform	36172
Sippican River	MA95-07	County Road, Marion/Wareham to confluence with Weweantic River, Marion/Wareham.	0.08	Square Miles	Fecal Coliform	36172
Snell Creek	MA95-44	Headwaters west of Main Street, Westport to Drift Road, Westport.	1.50	Miles	Enterococcus	36170
					Escherichia Coli (E. Coli)	36170
					Fecal Coliform	36170
Snell Creek	MA95-45	Drift Road, Westport to 'Marcus' Bridge', Westport (prior to 2004 this segment included estuarine portion).	0.40	Miles	Enterococcus	36170
					Escherichia Coli (E. Coli)	36170
					Fecal Coliform	36170
Snell Creek	MA95-59	'Marcus' Bridge', Westport to confluence with East Branch Westport River, Westport (formerly part of 2002 segment: Snell Creek MA95-45).	0.01	Square Miles	Fecal Coliform	36172
Snipatuit Pond	MA95137	Rochester.	711.00	Acres	Mercury in Fish Tissue	33880
Turner Pond	MA95151	New Bedford/Dartmouth.	86.00	Acres	Mercury in Fish Tissue	33880



**Category 4a waters listed alphabetically by major watershed
"TMDL is completed"**

Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Wankinco River	MA95-50	From outlet of Parker Mills Pond, south of Elm Street, Wareham to the confluence with the Agawam River (at a line between a point south of Mayflower Ridge Drive and a point north of the railroad tracks near Sandwich Road (forming headwaters of the Wareham River)) just north of Route 6 bridge, Wareham.	0.05	Square Miles	Fecal Coliform	36172
West Falmouth Harbor	MA95-22	From the confluence with Harbor Head at Chappaquoit Road, Falmouth to the mouth at Buzzards Bay at a line connecting the ends of the seawalls from Little Island and Chappaquoit Point, Falmouth (including Inner West Falmouth Harbor, Outer West Falmouth Harbor, Snug Harbor, and Mashapaquit Creek).	0.29	Square Miles	Estuarine Bioassessments	34328
					Estuarine Bioassessments	34332
					Fecal Coliform	36172
					Nitrogen, Total	34328
					Nitrogen, Total	34332
					Nitrogen, Total	34917
					Nitrogen, Total	34918
Westport River	MA95-54	From the confluences of the East Branch Westport River and the West Branch Westport River to Rhode Island Sound (at a line from the southwestern tip of Horseneck Point to the easternmost point near Westport Light), Westport (includes Westport Harbor and Hulda Cove).	0.74	Square Miles	Fecal Coliform	36172
Cape Cod						
Baker Pond	MA96008	Orleans/Brewster.	26.00	Acres	Mercury in Fish Tissue	33880
Barnstable Harbor	MA96-01	From the mouths of Scorton and Spring creeks, Barnstable east to an imaginary line drawn from Beach Point to the western edge of the Mill Creek estuary, Barnstable.	3.20	Square Miles	Fecal Coliform	36771
Bass River	MA96-118	"Grand Cove" portion of Bass River, north of Main Street (Route 28), Yarmouth.	0.12	Square Miles	Nitrogen, Total	68003
					Nutrient/Eutrophication Biological Indicators	68003
Bass River	MA96-12	Headwaters outlet Kelleys Bay, Route 6, Dennis/Yarmouth to mouth at inlet Nantucket Sound, Yarmouth (excluding Grand Cove, Dennis).	0.69	Square Miles	Estuarine Bioassessments	68003
					Fecal Coliform	36771
					Nitrogen, Total	68003
Bearse Pond	MA96012	Barnstable.	64.00	Acres	(Fanwort*)	
					Mercury in Fish Tissue	42393
Bournes Pond	MA96-57	west of Central Avenue, Falmouth outlet to Vineyard Sound, including Israels Cove, Falmouth.	0.24	Square Miles	Estuarine Bioassessments	32535
					Estuarine Bioassessments	32638
					Fecal Coliform	36772
					Nitrogen, Total	32535
					Nitrogen, Total	32638
Bucks Creek	MA96-44	Outlet Harding Beach Pond (locally known as Sulfur Springs), Chatham to mouth at inlet Cockle Cove, Nantucket Sound, Chatham.	0.02	Square Miles	Enterococcus	36772
					Fecal Coliform	36772
					Nitrogen, Total	36230
Bumps River	MA96-02	From pond outlet, Bumps River Road, Barnstable through Scudder Bay to mouth at Main Street/South Main Street bridge (confluence with Centerville River), Barnstable.	0.07	Square Miles	Fecal Coliform	36771



**Category 4a waters listed alphabetically by major watershed
"TMDL is completed"**

Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Centerville River	MA96-04	From approximately 300 feet west of Elliot Road, Barnstable to inlet Centerville Harbor, including East Bay, Barnstable.	0.24	Square Miles	Estuarine Bioassessments	33858
					Fecal Coliform	36771
					Nitrogen, Total	33858
Chase Garden Creek	MA96-35	New Boston Road, Dennis to mouth at inlet Cape Cod Bay, Dennis/Yarmouth.	0.13	Square Miles	Fecal Coliform	36771
Childs River	MA96-120	From confluence with fresh water portion south of Barrows Road, Falmouth to mouth at confluence with Seapit River, Falmouth (area within Waquoit Bay ACEC designated as ORW).	0.06	Square Miles	Nitrogen, Total	R1_MA_2020_08
					Nutrient/Eutrophication Biological Indicators	R1_MA_2020_08
Cockle Cove Creek	MA96-79	Northeast of the bend in Cockle Drive, Chatham to mouth at confluence with Bucks Creek, Chatham (2005 orthophotos used to delineate segment).	0.01	Square Miles	Enterococcus	42353
					Fecal Coliform	42353
Cotuit Bay	MA96-63	From North Bay at Point Isabella, Barnstable oceanward to a line extended along Oyster Harbors Beach, Barnstable.	0.85	Square Miles	Fecal Coliform	36582
					Nitrogen, Total	33988
Dinahs Pond	MA96-112	Yarmouth.	0.04	Square Miles	Nitrogen, Total	68003
					Nutrient/Eutrophication Biological Indicators	68003
Dock Creek	MA96-86	From railroad crossing northeast of Route 6A, Sandwich to confluence with Old Harbor Creek, Sandwich.	0.02	Square Miles	Fecal Coliform	42354
Duck Pond	MA96068	Wellfleet.	11.00	Acres	Mercury in Fish Tissue	33880
Dyer Pond	MA96070	Wellfleet.	10.00	Acres	Mercury in Fish Tissue	33880
East Harbor (Pilgrim Lake)	MA96-83	Truro/Provincetown.	0.50	Square Miles	Fecal Coliform	42355
Eel Pond	MA96-121	Falmouth.	0.32	Square Miles	Estuarine Bioassessments	R1_MA_2020_08
					Nitrogen, Total	R1_MA_2020_08
					Nutrient/Eutrophication Biological Indicators	R1_MA_2020_08
Falmouth Inner Harbor	MA96-17	Waters included north of Falmouth Inner Harbor Light, Falmouth.	0.05	Square Miles	Nitrogen, Total	R1_MA_2020_06
					Nutrient/Eutrophication Biological Indicators	R1_MA_2020_06
Follins Pond	MA96-114	Yarmouth/Dennis.	0.32	Square Miles	Nitrogen, Total	68003
					Nutrient/Eutrophication Biological Indicators	68003
Frost Fish Creek	MA96-49	Headwaters outlet cranberry bog northwest of Stony Hill Road, Chatham to mouth at inlet Ryder Cove, Chatham.	0.01	Square Miles	Fecal Coliform	22513
					Nitrogen, Total	33781
Great Pond	MA96114	Truro.	17.00	Acres	Mercury in Fish Tissue	33880
Great Pond	MA96117	Wellfleet.	41.00	Acres	Mercury in Fish Tissue	33880
Great Pond	MA96-54	From inlet of Coonamessett River, Falmouth to Vineyard Sound (excluding Perch Pond), Falmouth.	0.40	Square Miles	Enterococcus	36772
					Estuarine Bioassessments	32532
					Fecal Coliform	36772
					Nitrogen, Total	32532



**Category 4a waters listed alphabetically by major watershed
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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Great River	MA96-60	From inlet of Abigails Brook, Mashpee to mouth at inlet Waquoit Bay (excluding Jehu Pond), Mashpee.	0.16	Square Miles	Estuarine Bioassessments	33815
					Estuarine Bioassessments	R1_MA_2020_08
					Nitrogen, Total	33815
					Nitrogen, Total	R1_MA_2020_08
Green Pond	MA96-55	east of Acapesket Road, Falmouth outlet to Vineyard Sound, Falmouth.	0.21	Square Miles	Estuarine Bioassessments	32534
					Fecal Coliform	36772
					Nitrogen, Total	32534
Halls Creek	MA96-93	Estuarine portion, from Marchant Mill Way, Barnstable to mouth at inlet Centerville Harbor, Barnstable.	0.07	Square Miles	Fecal Coliform	42356
Hamblin Pond	MA96-58	From inlet of Red Brook, Falmouth/Mashpee to outlet of Little River, Mashpee and inlet/outlet of Waquoit Bay west of Meadow Neck Road, Falmouth/Mashpee.	0.19	Square Miles	Estuarine Bioassessments	33812
					Estuarine Bioassessments	R1_MA_2020_08
					Fecal Coliform	36771
					Nitrogen, Total	33812
					Nitrogen, Total	R1_MA_2020_08
Harding Beach Pond	MA96-43	locally known as Sulfur Springs (northeast of Bucks Creek), Chatham.	0.07	Square Miles	Nutrient/Eutrophication Biological Indicators	R1_MA_2020_08
					Fecal Coliform	36772
Herring River	MA96-22	From outlet Herring River Reservoir (at North Harwich Reservoir Dam NATID: MA02423) west of Bells Neck Road, Harwich to mouth at inlet Nantucket Sound, Harwich.	0.07	Square Miles	Nitrogen, Total	36229
					Estuarine Bioassessments	65960
					Fecal Coliform	36772
					Nitrogen, Total	65960
Horseleach Pond	MA96144	Truro.	23.00	Acres	Nutrient/Eutrophication Biological Indicators	65960
					Mercury in Fish Tissue	42401
Hyannis Inner Harbor	MA96-82	Waters landward of an imaginary line drawn from Harbor Bluff, Barnstable to Hyannis Park, Yarmouth.	0.13	Square Miles	Fecal Coliform	42357
					Nitrogen, Total	64145
Jehu Pond	MA96-59	Mashpee.	0.09	Square Miles	Estuarine Bioassessments	33814
					Estuarine Bioassessments	R1_MA_2020_08
					Nitrogen, Total	33814
					Nitrogen, Total	R1_MA_2020_08
					Nutrient/Eutrophication Biological Indicators	R1_MA_2020_08
Johns Pond	MA96157	Mashpee.	316.00	Acres	(Fish Passage Barrier*)	
					Mercury in Fish Tissue	33880
Kelleys Bay	MA96-113	Dennis/Yarmouth.	0.10	Square Miles	Nitrogen, Total	68003
					Nutrient/Eutrophication Biological Indicators	68003
Lawrence Pond	MA96165	Sandwich.	138.00	Acres	Mercury in Fish Tissue	42402



**Category 4a waters listed alphabetically by major watershed
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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Lewis Pond	MA96-109	north of Seagull Road, Yarmouth (segment includes tidal channel to Parkers River).	0.07	Square Miles	Nitrogen, Total	68369
					Nutrient/Eutrophication Biological Indicators	68369
Little Harbor	MA96-19	The waters north of an imaginary line drawn from Juniper Point, Falmouth east to Nobska Beach, Falmouth.	0.07	Square Miles	Fecal Coliform	36772
Little Namskaket Creek	MA96-26	Source west of Route 6, Orleans to mouth at inlet Cape Cod Bay, Orleans.	0.01	Square Miles	Fecal Coliform	36772
Little Pleasant Bay	MA96-78	Waters north and east of imaginary lines drawn from the northeasterly edge of Orleans (near The Horseshoe), southeasterly around the northeastern tip of Sipson Island, and Sipson Meadow, Orleans then south to the northern tip of Strong Island, Chatham then east to a point on the inner Cape Cod National Seashore (CCNS)(including SARIS named Hog Island and Broad creeks) (excluding the delineated segments; The River, Pochet Neck, and Paw Wah Pond) (areas within CCNS designated as ORW).	3.27	Square Miles	Nitrogen, Total	33794
Little Pond	MA96-56	west of Vista Boulevard, Falmouth outlet to Vineyard Sound, Falmouth.	0.07	Square Miles	Estuarine Bioassessments	34009
					Fecal Coliform	42364
Little River	MA96-61	Headwaters outlet Hamblin Pond, Mashpee to mouth at confluence with Great River, Mashpee.	0.03	Square Miles	Estuarine Bioassessments	33813
					Estuarine Bioassessments	R1_MA_2020_08
					Nitrogen, Total	33813
					Nitrogen, Total	R1_MA_2020_08
Long Pond	MA96179	Wellfleet.	35.00	Acres	Mercury in Fish Tissue	33880
Mashpee River	MA96-24	Quinquisset Avenue, Mashpee to mouth at inlet Shoestring Bay (formerly to mouth at Popponesset Bay), Mashpee.	0.08	Square Miles	Estuarine Bioassessments	33965
					Fecal Coliform	36771
Mill Creek	MA96-37	Headwaters outlet Halletts Millpond, Barnstable/Yarmouth to mouth at inlet Cape Cod Bay, Barnstable/Yarmouth.	0.03	Square Miles	Fecal Coliform	36771
Mill Creek	MA96-41	Headwaters outlet Taylors Pond, Chatham to mouth at inlet Cockle Cove, Chatham.	0.03	Square Miles	Fecal Coliform	36772
Mill Creek	MA96-80	Headwaters, outlet Mill Pond, Yarmouth to mouth at inlet Lewis Bay, Yarmouth.	0.07	Square Miles	Fecal Coliform	42365
					Nitrogen, Total	64148
					Nitrogen, Total	64149
Mill Creek	MA96-85	Headwaters, outlet Shawme Lake Lower, Sandwich to mouth at confluence with Old Harbor Creek, Sandwich.	0.02	Square Miles	Fecal Coliform	42366
Mill Pond	MA96-117	Yarmouth.	0.09	Square Miles	Nitrogen, Total	68003
					Nutrient/Eutrophication Biological Indicators	68003



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Mill Pond	MA96-52	including Little Mill Pond (PALIS # 96174), Chatham.	0.06	Square Miles	Estuarine Bioassessments	36222
					Nitrogen, Total	36222
Muddy Creek	MA96-51	Source south of Countryside Drive and north-northeast of Old Queen Anne Road, Chatham to mouth at inlet Pleasant Bay, Harwich/Chatham, including Upper and Lower reaches.	0.05	Square Miles	(Fish Passage Barrier*)	
					Fecal Coliform	22512
					Nitrogen, Total	33797
					Nitrogen, Total	33798
Namequoit River	MA96-71	Headwaters, outlet Areys Pond, Orleans to mouth at confluence with The River, Orleans.	0.06	Square Miles	Estuarine Bioassessments	33791
					Nitrogen, Total	33791
Namskaket Creek	MA96-27	Source west of Route 6, Orleans/Brewster to mouth at inlet Cape Cod Bay, Brewster/Orleans.	0.03	Square Miles	Fecal Coliform	36772
North Bay	MA96-66	From Prince Cove outlet at Fox Island to just south of Bridge Street (including Dam Pond) and separated from Cotuit Bay at a line from Point Isabella, Barnstable southward to the opposite shore, Barnstable.	0.47	Square Miles	Estuarine Bioassessments	33990
					Fecal Coliform	36584
Old Harbor Creek	MA96-84	From Foster Road, Sandwich to mouth at inlet Sandwich Harbor, Sandwich.	0.06	Square Miles	Fecal Coliform	42367
Oyster Pond	MA96-45	Including Stetson Cove, Chatham.	0.21	Square Miles	Estuarine Bioassessments	36219
					Fecal Coliform	36772
					Nitrogen, Total	36219
Oyster Pond	MA96-62	east of Fells Road, Falmouth.	0.10	Square Miles	Dissolved Oxygen	34345
					Estuarine Bioassessments	34345
					Fecal Coliform	36772
Oyster Pond River	MA96-46	Headwaters outlet Oyster Pond, Chatham to mouth at inlet Stage Harbor, Chatham.	0.14	Square Miles	Estuarine Bioassessments	36220
					Fecal Coliform	36772
					Nitrogen, Total	36220
Pamet River	MA96-31	From tidegate at Route 6A, Truro to mouth at inlet Cape Cod Bay (including Pamet Harbor), Truro.	0.14	Square Miles	Fecal Coliform	36772
Parkers River	MA96-38	Headwaters outlet Seine Pond, Yarmouth to mouth at inlet Nantucket Sound, Yarmouth (excluding Lewis Pond, Yarmouth).	0.04	Square Miles	Fecal Coliform	36771
					Nitrogen, Total	68361
					Nutrient/Eutrophication Biological Indicators	68361
Paw Wah Pond	MA96-72	Orleans.	0.01	Square Miles	Estuarine Bioassessments	33792
					Fecal Coliform	42368
					Nitrogen, Total	33792
Perch Pond	MA96-53	Connects to northwest end of Great Pond, west of Keechipam Way, Falmouth.	0.03	Square Miles	Nitrogen, Total	32537
Peters Pond	MA96244	Sandwich/Mashpee.	123.00	Acres	Mercury in Fish Tissue	33880



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Pochet Neck	MA96-73	outlet to Little Pleasant Bay, Orleans (areas within Cape Cod National Seashore designated as ORW).	0.24	Square Miles	Estuarine Bioassessments	33793
					Fecal Coliform	42369
					Nitrogen, Total	33793
Popponeset Bay	MA96-40	The waters seaward of an imaginary line connecting Ryefield Point, Barnstable and Punkhorn Point, Mashpee to inlet of Nantucket Sound (including Ockway Bay, Mashpee and Pinquisset Cove, Barnstable) (excludes Popponeset Creek, Mashpee).	0.68	Square Miles	Estuarine Bioassessments	33967
					Estuarine Bioassessments	33968
					Estuarine Bioassessments	33969
Prince Cove	MA96-07	Includes areas east of Prince Cove (which are locally known as "Warren Cove" and "Prince Cove Channel") to confluence with North Bay, Barnstable.	0.14	Square Miles	Estuarine Bioassessments	33991
					Estuarine Bioassessments	33992
					Estuarine Bioassessments	33993
					Fecal Coliform	36585
Provincetown Harbor	MA96-29	The waters northwest of an imaginary line drawn northeasterly from the tip of Long Point, Provincetown to Pilgrim Beach (in vicinity of Sandbars Inn), Truro (area within Cape Cod National Seashore designated as ORW).	4.33	Square Miles	Fecal Coliform	36772
Quanset Pond	MA96-74	Orleans.	0.02	Square Miles	Nitrogen, Total	33791
					Nitrogen, Total	33795
Quashnet River	MA96-20	From just south of Route 28, Falmouth to mouth at inlet Waquoit Bay, Falmouth. Also known as Moonakis River.	0.07	Square Miles	Dissolved Oxygen	33811
					Dissolved Oxygen	R1_MA_2020_08
					Fecal Coliform	36772
					Nitrogen, Total	33811
					Nitrogen, Total	R1_MA_2020_08
Rock Harbor Creek	MA96-16	Headwaters outlet Cedar Pond, Orleans to mouth at inlet Cape Cod Bay, Eastham/Orleans.	0.03	Square Miles	(Fish Passage Barrier*)	
					Fecal Coliform	36772
Round Pond (East)	MA96260	Truro.	6.00	Acres	Mercury in Fish Tissue	42403
Round Pond (west)	MA96261	Truro.	2.00	Acres	Mercury in Fish Tissue	42404
Ryder Cove	MA96-50	Chatham.	0.19	Square Miles	Estuarine Bioassessments	33780
					Fecal Coliform	36772
					Nitrogen, Total	33780
Sagelot Pond	MA96-119	west of Great Oak Road, Mashpee (segment includes tidal channels to Waquoit Bay).	0.06	Square Miles	Nutrient/Eutrophication Biological Indicators	R1_MA_2020_08
Santuit River	MA96-92	From confluence with fresh water portion south of Old Mill Road, Mashpee to mouth at inlet Shoestring Bay, Mashpee/Barnstable.	0.01	Square Miles	Fecal Coliform	42360
Saquatucket Harbor	MA96-23	South of Route 28, Harwich outlet to Nantucket Sound, Harwich.	0.02	Square Miles	Fecal Coliform	36772
					Nitrogen, Total	65884
					Nutrient/Eutrophication Biological Indicators	65884



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Scorton Creek	MA96-30	Jones Lane, Sandwich to mouth at inlet Cape Cod Bay, Sandwich (includes Scorton Harbor).	0.03	Square Miles	Fecal Coliform	36771
Seapuit River	MA96-64	south of Osterville Grand Island, Barnstable to Cotuit Bay and West Bay, Barnstable.	0.06	Square Miles	Fecal Coliform	36583
Seine Pond	MA96-110	east of Winslow Gray Road, Yarmouth.	0.13	Square Miles	Nitrogen, Total	68362
					Nutrient/Eutrophication Biological Indicators	68362
Sesuit Creek	MA96-13	Approximately 650 feet downstream from Route 6A, Dennis to mouth at inlet Sesuit Harbor, Cape Cod Bay, Dennis.	0.01	Square Miles	Fecal Coliform	36771
Sheep Pond	MA96289	Brewster.	139.00	Acres	Mercury in Fish Tissue	33880
Shoestring Bay	MA96-08	Quinaquisset Avenue, Mashpee/Barnstable to Popponesset Bay (line from Ryefield Point, Barnstable to Punkhorn Point, Mashpee, including Gooseberry Island), Barnstable/Mashpee.	0.31	Square Miles	Estuarine Bioassessments	33966
					Fecal Coliform	36771
Slough Pond	MA96298	Truro.	29.00	Acres	Mercury in Fish Tissue	33880
Snake Pond	MA96302	Sandwich.	81.00	Acres	Mercury in Fish Tissue	33880
Snow Pond	MA96303	Truro.	7.00	Acres	Mercury in Fish Tissue	33880
Snows Creek	MA96-81	East of Old Colony Road, Barnstable to mouth at inlet Lewis Bay, Barnstable.	0.02	Square Miles	Fecal Coliform	42361
Spectacle Pond	MA96306	Wellfleet.	2.00	Acres	Mercury in Fish Tissue	42405
Springhill Creek	MA96-87	From railroad crossing northeast of Route 6A, Sandwich to mouth at confluence with Old Harbor Creek, Sandwich.	0.01	Square Miles	Fecal Coliform	42362
Stewarts Creek	MA96-94	Estuarine portion west of Stetson Street, Barnstable to mouth at inlet Hyannis Harbor, Barnstable.	0.01	Square Miles	Fecal Coliform	42363
Swan Pond	MA96-111	Dennis.	0.22	Square Miles	Nitrogen, Total	68000
					Nutrient/Eutrophication Biological Indicators	68000
Swan Pond River	MA96-14	Headwaters, outlet Swan Pond, Dennis to mouth at inlet Nantucket Sound, Dennis.	0.04	Square Miles	Estuarine Bioassessments	68001
					Fecal Coliform	36771
					Nitrogen, Total	68001
					Nutrient/Eutrophication Biological Indicators	68001
Taylors Pond	MA96-42	Chatham.	0.02	Square Miles	Fecal Coliform	36772
					Nitrogen, Total	36231
The River	MA96-76	The water landward of an imaginary line drawn between Old Field Point and Namequoit Point including Meetinghouse Pond, and Kescayo Gansett Pond (locally known as "Lonnie's Pond"), Orleans (excluding the delineated segments; Namequoit River and Areys Pond).	0.41	Square Miles	Fecal Coliform	42359
					Nitrogen, Total	33787
					Nitrogen, Total	33788
					Nitrogen, Total	33789
					Nitrogen, Total	33790



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Unnamed Tributary	MA96-97	Unnamed tributary to Hyannis Inner Harbor (referred to in TMDL as Inner Harbor Creek), from salt water portion north of Park Avenue, Yarmouth to mouth at inlet Hyannis Inner Harbor, Yarmouth.	0.001	Square Miles	Nitrogen, Total	64151
Wakeby Pond	MA96346	Mashpee/Sandwich.	353.00	Acres	Mercury in Fish Tissue	33880
Waquoit Bay	MA96-21	From mouths of Seapit River, Quashnet River (also known as Moonakis River), Falmouth and Great River, Mashpee to inlet of Vineyard Sound, Falmouth/Mashpee.	1.43	Square Miles	Dissolved Oxygen	R1_MA_2020_08
					Estuarine Bioassessments	R1_MA_2020_08
					Nitrogen, Total	R1_MA_2020_08
					Nutrient/Eutrophication Biological Indicators	R1_MA_2020_08
Weir Creek	MA96-116	Headwaters, outlet Mill Pond, Yarmouth to mouth at confluence with Muddy Creek, Yarmouth.	0.02	Square Miles	Nitrogen, Total	68003
Wequaquet Lake	MA96333	Barnstable.	577.00	Acres	(Fanwort*)	
					(Fish Passage Barrier*)	
					Mercury in Fish Tissue	33880
West Bay	MA96-65	From south of the Bridge Street bridge, Barnstable outlet to Nantucket Sound including Eel River, Barnstable (excludes Seapuit River).	0.52	Square Miles	Estuarine Bioassessments	33989
Charles						
Beaver Pond	MA72004	Bellingham/Milford.	87.00	Acres	Mercury in Fish Tissue	42394
Bogastow Brook	MA72-16	Headwaters, outlet Factory Pond, Holliston to mouth at inlet South End Pond, Millis.	9.40	Miles	(Dewatering*)	
					Escherichia Coli (E. Coli)	32373
					Fecal Coliform	32373
Cedar Swamp Pond	MA72016	locally known as "Milford Pond", Milford.	99.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Non-Native Aquatic Plants*)	
					Dissolved Oxygen	40319
					Mercury in Fish Tissue	42395
Charles River	MA72-01	Headwaters, outlet Echo Lake, Hopkinton to Dilla Street (just upstream of Cedar Swamp Pond), Milford.	2.50	Miles	(Dewatering*)	
					(Flow Regime Modification*)	
					Dissolved Oxygen	40318
Charles River	MA72-33	From outlet Cedar Swamp Pond, Milford to the Milford WWTF discharge (NPDES: MA0100579), Hopedale (formerly part of 2006 segment: Charles River MA72-02) (two culverted portions totaling approximately 1100 feet (0.21mile) (as of 2008 excluding the approximately 0.8 mile through segment: Cedar Swamp Pond MA72016).	2.00	Miles	(Physical substrate habitat alterations*)	
					Escherichia Coli (E. Coli)	32364
					Nutrient/Eutrophication Biological Indicators	40317
Echo Lake	MA72035	Milford/Hopkinton.	72.00	Acres	Mercury in Fish Tissue	33880
Factory Pond	MA72037	Holliston.	10.00	Acres	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	40319



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Franklin Reservoir Northeast	MA72095	Franklin.	21.00	Acres	(Water Chestnut*)	
					Aquatic Plants (Macrophytes)	40319
					Turbidity	40319
Franklin Reservoir Southwest	MA72032	Franklin.	13.00	Acres	Aquatic Plants (Macrophytes)	40319
					Turbidity	40319
Hardys Pond	MA72045	Waltham.	43.00	Acres	(Water Chestnut*)	
					Algae	40319
					Phosphorus, Total	40319
					Turbidity	40319
Houghton Pond	MA72050	Holliston.	17.00	Acres	Algae	40319
					Turbidity	40319
Lake Pearl	MA72092	Wrentham.	237.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Non-Native Aquatic Plants*)	
					Dissolved Oxygen	40319
Linden Pond	MA72063	Holliston.	1.00	Acres	Aquatic Plants (Macrophytes)	40319
					Turbidity	40319
Lymans Pond	MA72070	Dover.	4.00	Acres	Aquatic Plants (Macrophytes)	40319
					Turbidity	40319
Mirror Lake	MA72078	Wrentham/Norfolk.	62.00	Acres	(Curly-leaf Pondweed*)	
					Nutrient/Eutrophication Biological Indicators	40319
					Phosphorus, Total	40319
					Transparency / Clarity	40319
Rosemary Brook	MA72-25	Headwaters, outlet Rosemary Lake, Needham to mouth at confluence with the Charles River, Wellesley.	3.30	Miles	Dissolved Oxygen	40317
					Phosphorus, Total	40317
Stop River	MA72-10	From Norfolk-Walpole MCI discharge, Norfolk to confluence with Charles River, Medfield.	4.20	Miles	Organic Enrichment (Sewage) Biological Indicators	40317
					Phosphorus, Total	40317
Uncas Pond	MA72122	Franklin.	17.00	Acres	(Non-Native Aquatic Plants*)	
					Dissolved Oxygen	40319
Unnamed Tributary	MA72-32	Locally known as "Sawins Brook" - emerges east of Elm Street, Watertown to mouth at confluence with the Charles River, Watertown (one culverted portion approximately 360 feet (0.07mile)).	0.50	Miles	Escherichia Coli (E. Coli)	32382
Chicopee						
Lake Lashaway	MA36079	North Brookfield/East Brookfield.	274.00	Acres	(Fanwort*)	
					Mercury in Fish Tissue	33880
Long Pond	MA36083	Springfield.	14.00	Acres	Nutrient/Eutrophication Biological Indicators	722



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Minechoag Pond	MA36093	Ludlow.	21.00	Acres	Nutrient/Eutrophication Biological Indicators	3629
Mona Lake	MA36094	Springfield.	11.00	Acres	Nutrient/Eutrophication Biological Indicators	3630
Pottapaug Pond	MA36125	Petersham/Hardwick.	568.00	Acres	(Non-Native Aquatic Plants*)	
Quabbin Reservoir	MA36129	Petersham/Pelham/Ware/Hardwick/Shutesbury/Belchertown/Ne w Salem.	24,010.0 0	Acres	(Non-Native Aquatic Plants*)	
Quacumquasit Pond	MA36131	Brookfield/East Brookfield/Sturbridge. (also known as South Pond)	223.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*) (Fanwort*) (Non-Native Aquatic Plants*)	
Spectacle Pond	MA36142	Wilbraham.	9.00	Acres	Nutrient/Eutrophication Biological Indicators	3631
Sugden Reservoir	MA36150	Spencer.	85.00	Acres	Nutrient/Eutrophication Biological Indicators	3633
Wickaboag Pond	MA36166	West Brookfield.	316.00	Acres	Turbidity	1332
Concord (SuAsCo)						
Ashland Reservoir	MA82003	Ashland.	168.00	Acres	(Non-Native Aquatic Plants*)	
Boons Pond	MA82011	Stow/Hudson.	174.00	Acres	Mercury in Fish Tissue	42396
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Algae	2353
					Mercury in Fish Tissue	33880
Nutting Lake	MA82124	[West Basin] Billerica.	51.00	Acres	Mercury in Fish Tissue	33880
Sudbury Reservoir	MA82106	Southborough/Marlborough.	1,181.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*) (Water Chestnut*)	
					Mercury in Fish Tissue	33880
Walden Pond	MA82109	Concord.	63.00	Acres	Mercury in Fish Tissue	33880
Warners Pond	MA82110	Concord.	59.00	Acres	(Water Chestnut*)	
					Mercury in Fish Tissue	33880
Connecticut						
Lake Warner	MA34098	Hadley.	65.00	Acres	(Fanwort*)	
					(Water Chestnut*)	
					Algae	651
					Dissolved Oxygen	651
					Phosphorus, Total	651



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
					Turbidity	651
Lake Wyola	MA34103	Shutesbury.	124.00	Acres	Nutrient/Eutrophication Biological Indicators	653
					Phosphorus, Total	653
Leverett Pond	MA34042	Leverett.	91.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*) (Non-Native Aquatic Plants*)	
					Nutrient/Eutrophication Biological Indicators	675
Deerfield						
Ashfield Pond	MA33001	Ashfield.	38.00	Acres	Mercury in Fish Tissue	42397
Plainfield Pond	MA33017	Plainfield.	60.00	Acres	Mercury in Fish Tissue	33880
Farmington						
Otis Reservoir	MA31027	Otis/Tolland/Blandford.	989.00	Acres	Mercury in Fish Tissue	33880
French						
Buffumville Lake	MA42005	Charlton/Oxford.	199.00	Acres	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Dresser Hill Pond	MA42014	Charlton.	8.00	Acres	Turbidity	2360
Dutton Pond	MA42015	Leicester.	6.00	Acres	Nutrient/Eutrophication Biological Indicators	2354
					Phosphorus, Total	2354
Gore Pond	MA42018	Dudley/Charlton.	169.00	Acres	(Non-Native Aquatic Plants*)	
					Algae	2361
					Dissolved Oxygen	2361
					Turbidity	2361
Greenville Pond	MA42023	Leicester.	31.00	Acres	Turbidity	2355
Hudson Pond	MA42029	Oxford/Sutton.	15.00	Acres	(Aquatic Plants (Macrophytes)*)	
					Nutrient/Eutrophication Biological Indicators	2363
Jones Pond	MA42030	Charlton/Spencer.	30.00	Acres	(Aquatic Plants (Macrophytes)*)	
					Nutrient/Eutrophication Biological Indicators	2364
Lowes Pond	MA42034	Oxford.	33.00	Acres	Nutrient/Eutrophication Biological Indicators	2366
Mckinstry Pond	MA42035	Oxford.	16.00	Acres	Nutrient/Eutrophication Biological Indicators	2367



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Pikes Pond	MA42044	Charlton.	28.00	Acres	Turbidity	2371
Rochdale Pond	MA42048	Leicester.	43.00	Acres	Nutrient/Eutrophication Biological Indicators	2356
Wallis Pond	MA42062	Dudley.	24.00	Acres	(Aquatic Plants (Macrophytes)*)	
					Dissolved Oxygen	2375
					Nutrient/Eutrophication Biological Indicators	2375
Housatonic						
Pontoosuc Lake	MA21083	Lanesborough/Pittsfield.	500.00	Acres	(Brittle Naiad, Najas Minor*)	
					(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Water Chestnut*)	
					Mercury in Fish Tissue	33880
Ipswich						
Hood Pond	MA92025	Ipswich/Topsfield.	68.00	Acres	Mercury in Fish Tissue	33880
Mill Pond	MA92041	Burlington.	59.00	Acres	Mercury in Fish Tissue	33880
Islands						
Edgartown Great Pond	MA97-17	excluding Jacobs Pond (PALIS# 97038) Edgartown, Martha's Vineyard.	1.35	Square Miles	Estuarine Bioassessments	64380
					Nitrogen, Total	64380
					Nutrient/Eutrophication Biological Indicators	64380
Farm Pond	MA97-30	Oak Bluffs.	0.05	Square Miles	Dissolved Oxygen	64662
					Estuarine Bioassessments	64662
					Nitrogen, Total	64662
					Nutrient/Eutrophication Biological Indicators	64662
Gibbs Pond	MA97028	Nantucket.	34.00	Acres	Mercury in Fish Tissue	33880
Hither Creek	MA97-28	From the outlet of Long Pond to Madaket Harbor at an imaginary line drawn easterly from Jackson Point to Little Neck, Nantucket (as of the 2016 reporting cycle this segment includes Madaket Ditch).	0.07	Square Miles	Dissolved Oxygen	64480
					Estuarine Bioassessments	64480
					Nitrogen, Total	64480
					Nutrient/Eutrophication Biological Indicators	64480

Lagoon Pond	MA97-11		0.82		Dissolved Oxygen	64583
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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
		From Head of the Pond Road to confluence with Vineyard Haven Harbor at Beach Road, Tisbury/Oak Bluffs, Martha's Vineyard.		Square Miles	Dissolved Oxygen	64584
					Estuarine Bioassessments	64583
					Estuarine Bioassessments	64584
					Nitrogen, Total	64583
					Nitrogen, Total	64584
					Nutrient/Eutrophication Biological Indicators	64583
					Nutrient/Eutrophication Biological Indicators	64584
Miacomet Pond	MA97055	Nantucket.	34.00	Acres	Mercury in Fish Tissue	33880
North Head Long Pond	MA97-34	tidally restricted brackish water, Nantucket.	0.07	Square Miles	Nutrient/Eutrophication Biological Indicators	64481
Tom Nevers Pond	MA97097	Nantucket.	11.00	Acres	Mercury in Fish Tissue	33880
Trapps Pond	MA97-32	Edgartown.	0.07	Square Miles	Dissolved Oxygen	65321
					Estuarine Bioassessments	65321
					Nitrogen, Total	65321
					Nutrient/Eutrophication Biological Indicators	65321
Merrimack						
Forge Pond	MA84015	Westford/Littleton.	203.00	Acres	(Curly-leaf Pondweed*)	
					(Fanwort*)	
					(Water Chestnut*)	
					Mercury in Fish Tissue	33880
Knops Pond/Lost Lake	MA84084	Groton.	187.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Locust Pond	MA84031	Tyngsborough.	16.00	Acres	Mercury in Fish Tissue	33880
Millers						
Bents Pond	MA35007	Gardner.	6.00	Acres	Algae	4115
					Turbidity	4115
Hilchey Pond	MA35029	Gardner.	8.00	Acres	Turbidity	4128
Lake Denison	MA35017	Winchendon.	83.00	Acres	Dissolved Oxygen	4123
					Mercury in Fish Tissue	33880
Lake Rohunta	MA35106	(North Basin) Athol/Orange.	34.00	Acres	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Moores Pond	MA35048	Warwick.	39.00	Acres	Mercury in Fish Tissue	42398



**Category 4a waters listed alphabetically by major watershed
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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Parker Pond	MA35056	Gardner.	32.00	Acres	(Aquatic Plants (Macrophytes)*)	
					(Non-Native Aquatic Plants*)	
					Nutrient/Eutrophication Biological Indicators	4134
Reservoir No. 1	MA35063	Athol.	8.00	Acres	(Aquatic Plants (Macrophytes)*)	
					Nutrient/Eutrophication Biological Indicators	4137
Upper Naukeag Lake	MA35090	Ashburnham.	305.00	Acres	Mercury in Fish Tissue	33880
Upper Reservoir	MA35091	Westminster.	42.00	Acres	Mercury in Fish Tissue	33880
Whites Mill Pond	MA35099	Winchendon.	42.00	Acres	(Aquatic Plants (Macrophytes)*)	
					Nutrient/Eutrophication Biological Indicators	4144
Mount Hope Bay (Shore)						
Kickamuit River	MA61-08	Headwaters, outlet Warren Reservoir, Swansea, to state line, Swansea, MA/Warren, RI.	2.80	Miles	Escherichia Coli (E. Coli)	30702
					Fecal Coliform	30702
Lewin Brook Pond	MA61011	Swansea.	11.00	Acres	Mercury in Fish Tissue	33880
North Watuppa Pond	MA61004	Fall River/Westport.	1,728.00	Acres	Mercury in Fish Tissue	33880
Sawdy Pond	MA61005	Westport/Fall River.	369.00	Acres	Mercury in Fish Tissue	42407
Narragansett Bay (Shore)						
Fullers Brook	MA53-12	Headwaters in wetland north of Jacobs Street, Seekonk to confluence with Palmer River, Rehoboth.	1.70	Miles	Escherichia Coli (E. Coli)	35089
Oak Swamp Brook	MA53-15	Headwaters in Oak Swamp east of School Street, Rehoboth to confluence with Rocky Run, Rehoboth.	3.00	Miles	Escherichia Coli (E. Coli)	35091
Palmer River	MA53-03	From Route 6 bridge, Rehoboth to state line, Swansea, MA/Barrington, RI.	0.11	Square Miles	Fecal Coliform	35085
Palmer River	MA53-05	From the Shad Factory Pond dam (NATID: MA00787), Rehoboth to the Route 6 bridge, Rehoboth (formerly part of 2000 segment: Palmer River MA53-02).	0.09	Square Miles	Fecal Coliform	35087
Rocky Run	MA53-16	Headwaters in wetland east of Simmons Street, Rehoboth to approximately 0.1 mile east of Mason Street, Rehoboth (prior to 2010 this segment included estuarine portion).	8.60	Miles	Escherichia Coli (E. Coli)	35096
					Fecal Coliform	35096
Rocky Run	MA53-18	approximately 0.1 mile east of Mason Street, Rehoboth to confluence with Palmer River, Rehoboth (formerly part of 2008 segment: Rocky Run MA53-16).	0.003	Square Miles	Fecal Coliform	35096
Torrey Creek	MA53-14	Headwaters in wetland east of Benson Avenue, Seekonk to Barney Avenue, Rehoboth (includes culverted section	2.10	Miles	(Alteration in stream-side or littoral vegetative covers*)	



**Category 4a waters listed alphabetically by major watershed
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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
		[approximately 1200 feet] near Seekonk Speedway, Seekonk) (prior to 2010 this segment included estuarine portion).			(Habitat Assessment*)	
					Escherichia Coli (E. Coli)	35088
Torrey Creek	MA53-17	From Barney Avenue, Rehoboth to confluence with Palmer River, Rehoboth (formerly part of 2008 segment: Torrey Creek MA53-14).	0.004	Square Miles	Fecal Coliform	35088
Warren River Pond	MA53-06	Salt pond in Swansea on MA/RI border (portion in MA only).	0.06	Square Miles	Fecal Coliform	38904
Nashua						
Bare Hill Pond	MA81007	Harvard.	310.00	Acres	(Curly-leaf Pondweed*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					(Water Chestnut*)	
					Mercury in Fish Tissue	33880
Hickory Hills Lake	MA81031	Lunenburg.	311.00	Acres	Mercury in Fish Tissue	33880
Lake Wampanoag	MA81151	Ashburnham/Gardner.	224.00	Acres	Mercury in Fish Tissue	33880
Wachusett Reservoir	MA81147	Boylston/West Boylston/Clinton/Sterling.	3,962.00	Acres	(Brittle Naiad, Najas Minor*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
North Coastal						
Alewife Brook	MA93-46	From Landing Road, Essex to mouth at confluence with Essex River, Essex.	0.01	Square Miles	Fecal Coliform	50121
Annisquam River	MA93-12	The waters from the Gloucester Harbor side of the Route 127 bridge, Gloucester to Ipswich Bay at an imaginary line drawn from Bald Rocks to Wigwam Point, Gloucester.	0.82	Square Miles	Fecal Coliform	50121
Bass River	MA93-08	From outlet of "lower Shoe Pond" north of Route 62, Beverly to mouth at confluence with Danvers River and Beverly Harbor, Beverly.	0.12	Square Miles	Fecal Coliform	50121
Bennetts Pond Brook	MA93-48	Headwaters east of Lynn Fells Parkway (in Bellevue Golf Course), Melrose to mouth at confluence with Saugus River, Saugus.	2.40	Miles	Escherichia Coli (E. Coli)	50120
					Fecal Coliform	50120
Causeway Brook	MA93-47	Headwaters, outlet Dexter Pond, Manchester to mouth at confluence with Cat Brook, Manchester.	1.10	Miles	Escherichia Coli (E. Coli)	50120
					Fecal Coliform	50120
Chebacco Lake	MA93014	Hamilton/Essex.	204.00	Acres	(Curly-leaf Pondweed*)	
					(Fanwort*)	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
					(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Crane River	MA93-41	From outlet pump house sluiceway, Purchase Street, Danvers to mouth at confluence with Danvers River, Danvers (through a portion of former 1998 segment: Crane River MA93-03; portion formerly reported as 2002 lake segment: Crane River Pond MA93017).	0.07	Square Miles	Fecal Coliform	50121
Danvers River	MA93-09	From confluence of Porter, Crane and Waters rivers, Danvers to mouth at confluence with Bass and North rivers and Beverly Harbor, Beverly/Salem.	0.53	Square Miles	Fecal Coliform	50121
Essex Bay	MA93-16	The waters landward of Ipswich Bay contained within an imaginary line drawn from the northwestern tip of Gloucester near Coffins Beach to the southern tip of Castle Neck, Ipswich to the eastern most point of Dilly Island, Essex (mouth of Castle Neck River) and then from Cross Island, Essex to Conomo Point, Essex (mouth of Essex River) excluding Walker, Lanes, and Farm creeks.	0.97	Square Miles	Fecal Coliform	50121
Essex River	MA93-11	From salt water portion west of Southern Avenue, Essex to mouth at Essex Bay, Essex.	0.51	Square Miles	Fecal Coliform	50121
Frost Fish Brook	MA93-36	From Cabot Road, Danvers to mouth at confluence with Porter River, Route 62, Danvers.	1.00	Miles	Escherichia Coli (E. Coli)	50120
					Fecal Coliform	50120
Hawkes Brook	MA93-32	Headwaters near the Lynn/Lynnfield border to the inlet of Hawkes Pond, Lynnfield.	2.60	Miles	Escherichia Coli (E. Coli)	50120
					Fecal Coliform	50120
Lynn Harbor	MA93-52	The "inner" portion of Lynn Harbor; the waters landward of an imaginary line drawn from Black Rock Point, Nahant to the eastern edge of Point of Pines, Revere excluding the Saugus River (formerly part of 2006 segment: Lynn Harbor MA93-23).	1.62	Square Miles	Enterococcus	50122
					Fecal Coliform	50122
Lynn Harbor	MA93-53	The "outer" portion of Lynn Harbor into Broad Sound; the waters landward of an imaginary line drawn from Baileys Hill, Nahant to the eastern point of Winthrop Highlands, Winthrop to the seaward edge of the "inner" portion of Lynn Harbor (at an imaginary line drawn from Black Rock Point, Nahant to the eastern edge of Point of Pines, Revere) (formerly part of 2006 segment: Lynn Harbor MA93-23).	6.57	Square Miles	Fecal Coliform	50122
Manchester Harbor	MA93-19	The waters landward of an imaginary line drawn between Gales Point, Manchester and Chubb Point, Manchester excluding Cat Brook.	0.33	Square Miles	Enterococcus	50122
					Fecal Coliform	50122
Mill River	MA93-28	Headwaters, outlet Mill Pond, Gloucester to mouth at confluence with Annisquam River, Gloucester.	0.10	Square Miles	Fecal Coliform	50121
Nahant Bay	MA93-24	The waters landward of an imaginary line drawn between Galloupes Point, Swampscott and East Point, Nahant.	5.12	Square Miles	Enterococcus	50121
					Fecal Coliform	50121



**Category 4a waters listed alphabetically by major watershed
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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Pines River	MA93-15	Headwaters east of Route 1, Revere/Saugus to mouth at confluence with the Saugus River and Lynn Harbor, Saugus/Revere (portion formerly reported as 2002 lake segment: Seaplane Basin MA93067).	0.58	Square Miles	Fecal Coliform	50122
Porter River	MA93-04	Headwaters, confluence with Frost Fish Brook, Route 62, Danvers to mouth at confluence with Danvers River, Danvers (through former 2002 segment: Porters Pond MA93058).	0.13	Square Miles	Enterococcus	50121
					Fecal Coliform	50121
Rockport Harbor	MA93-57	Waters landward of an imaginary line from Gully Point, Rockport to Granite Pier, Rockport (including Back Harbor and a portion of Sandy Bay) (area includes former 2010 segment: Rockport Harbor MA93-17).	0.35	Square Miles	Fecal Coliform	50122
Salem Sound	MA93-55	Northern portion of Salem Sound, waters landward of and within imaginary lines from Chubb Point, Manchester to Gales Point, Manchester to the northwest point of Bakers Island, Salem to Hospital Point, Beverly (formerly part of 2010 segment: Salem Sound MA93-25).	3.46	Square Miles	Fecal Coliform	50121
Shute Brook	MA93-49	From saltwater wetland downstream of Central Street, Saugus to mouth at confluence with the Saugus River, Saugus.	0.01	Square Miles	Fecal Coliform	50121
Shute Brook	MA93-50	From the confluence of Fiske Brook, Saugus to approximately 350 feet downstream from Central Street, Saugus.	0.90	Miles	Escherichia Coli (E. Coli)	50120
					Fecal Coliform	50120
Waters River	MA93-01	From west of Route 128, Peabody/Danvers to mouth at confluence with Danvers River and Beverly Harbor, Danvers (formerly reported as 2002 lake segment: Waters River Pond MA93088).	0.09	Square Miles	Fecal Coliform	50121
Quinebaug						
East Brimfield Reservoir	MA41014	Brimfield/Sturbridge.	313.00	Acres	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Holland Pond	MA41022	Holland.	66.00	Acres	Mercury in Fish Tissue	33880
Shawsheen						
Kiln Brook	MA83-10	Outlet unnamed pond (in Pine Meadows Country Club), Lexington, to confluence with Shawsheen River, Bedford.	1.50	Miles	Fecal Coliform	2587
Long Meadow Brook	MA83-11	Wetland east of Lexington Street and north of Independence Drive, Burlington, to confluence with Vine Brook, Burlington.	1.30	Miles	Escherichia Coli (E. Coli)	2587
					Fecal Coliform	2587
Rogers Brook	MA83-04	From outlet of unnamed impoundment upstream of Morton Street, Andover (Prior to 1997 cycle listed as "Headwaters Billerica...") to confluence with Shawsheen River, Andover.	1.30	Miles	(Physical substrate habitat alterations*)	
					Escherichia Coli (E. Coli)	2587
					Fecal Coliform	2587
Sandy Brook	MA83-13	Headwaters north of Bedford Street and east of Fairfax Street, Burlington to confluence with Vine Brook, Burlington.	1.20	Miles	Escherichia Coli (E. Coli)	2587
					Fecal Coliform	2587
Shawsheen River	MA83-19	Outlet of Ballardvale Impoundment, Andover to the confluence with the Merrimack River, Lawrence. (formerly part of 2002 segment: Shawsheen River MA83-02 and all of 2002 segment: Shawsheen River MA83-03).	8.20	Miles	Escherichia Coli (E. Coli)	2587
					Fecal Coliform	2587



Category 4a waters listed alphabetically by major watershed
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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Strong Water Brook	MA83-07	Headwaters northeast of Long Pond, Tewksbury to confluence with Shawsheen River, Tewksbury.	4.90	Miles	Escherichia Coli (E. Coli)	2587
					Fecal Coliform	2587
Unnamed Tributary	MA83-21	Unnamed intermittent tributary to the Shawsheen River locally known as 'Sutton Brook', from headwaters north of Research Drive, Wilmington to confluence with the Shawsheen River, Tewksbury.	3.00	Miles	Escherichia Coli (E. Coli)	2587
South Coastal						
Aaron River Reservoir	MA94178	Cohasset/Hingham/Scituate.	136.00	Acres	Mercury in Fish Tissue	33880
Bluefish River	MA94-30	Saltmarsh north of Harrison Street, Duxbury to mouth at Duxbury Bay, Duxbury.	0.07	Square Miles	Fecal Coliform	61738
Cohasset Cove	MA94-32	The waters south of a line drawn from the Bassing Beach jetty, Scituate westerly to the opposite shore, Cohasset excluding Baileys Creek and The Gulf.	0.09	Square Miles	Fecal Coliform	61706
					Fecal Coliform	61739
Cohasset Harbor	MA94-01	The waters south of a line drawn from the northwestern point of Scituate Neck, Scituate to just north of Quarry Point, Cohasset not including Cohasset Cove, Cohasset/Scituate.	0.70	Square Miles	Fecal Coliform	61708
Ellisville Harbor	MA94-34	east of Ellisville Road, Plymouth.	0.01	Square Miles	Fecal Coliform	61716
Green Harbor	MA94-11	From the tidegates at Route 139, Marshfield to the mouth of the harbor at Massachusetts Bay/Cape Cod Bay, Marshfield.	0.08	Square Miles	Fecal Coliform	61731
Herring River	MA94-07	Headwaters, outlet Old Oaken Bucket Pond, Scituate to mouth at confluence with North River, Scituate.	0.08	Square Miles	Enterococcus	61727
					Fecal Coliform	61727
Little Harbor	MA94-20	Cove south of Nichols Road, west of Atlantic Avenue, and north of Cohasset center, Cohasset.	0.24	Square Miles	Fecal Coliform	2586
North River	MA94-06	Route 3A, Marshfield/Scituate to confluence with South River/Massachusetts Bay, Marshfield/Scituate.	0.54	Square Miles	Fecal Coliform	61730
Second Herring Brook	MA94-31	From the tidal zone near a wooden walk bridge approximately 205 meters downstream from the Second Herring Brook Pond Dam (NATID: MA02171), Norwell to mouth at confluence with the North River, Norwell.	0.002	Square Miles	Fecal Coliform	61721
South River	MA94-09	From dam near Main Street (Route 3A), Marshfield to mouth at confluence with North River/Massachusetts Bay, Marshfield/Scituate.	0.63	Square Miles	Enterococcus	61728
					Fecal Coliform	61728
The Gulf	MA94-19	Headwaters, outlet Hunters Pond, Scituate to confluence with Cohasset Cove just north of Border Street, Cohasset.	0.13	Square Miles	Fecal Coliform	61710
Taunton						
Assonet River	MA62-20	From Tisdale Pond Dam (NATID: MA03049) (north of Route 79/Elm Street intersection), Freetown to mouth at confluence with the Taunton River, Freetown/Berkley.	0.82	Square Miles	Fecal Coliform	40309
Beaver Brook	MA62-09	Outlet Cleveland Pond, Abington to mouth at confluence with Salisbury Plain River forming headwaters Matfield River, East Bridgewater.	6.80	Miles	Escherichia Coli (E. Coli)	40308
					Fecal Coliform	40308
Broad Cove	MA62-50	Dighton/Somerset (formerly reported as 2004 lake segment: Broad Cove MA62022).	0.13	Square Miles	Fecal Coliform	40309



**Category 4a waters listed alphabetically by major watershed
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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Lake Nippenicket	MA62131	Bridgewater/Raynham.	375.00	Acres	(Fanwort*)	
					Mercury in Fish Tissue	33880
Meadow Brook	MA62-38	Headwaters north of Pine Street, Whitman (through Forge Pond, East Bridgewater) to the confluence with the Matfield River, East Bridgewater.	6.00	Miles	(Fish Passage Barrier*)	
					Escherichia Coli (E. Coli)	40308
					Fecal Coliform	40308
Muddy Cove Brook	MA62-51	From the outlet of the small impoundment behind 333 Main Street (Zeneca Inc.), Dighton to mouth at confluence with the Taunton River, Dighton (formerly part of 2004 segment: Muddy Cove Brook MA62-23).	0.01	Square Miles	(Fish Passage Barrier*)	
					Fecal Coliform	40309
Segreganset River	MA62-55	From approximately 250 feet north of Brook Street, Dighton to mouth at confluence with the Taunton River, Dighton (formerly part of 2004 segment: Segreganset River MA62-18).	0.02	Square Miles	Fecal Coliform	40309
Somerset Reservoir	MA62174	Somerset.	164.00	Acres	Mercury in Fish Tissue	33880
Threemile River	MA62-57	From dam (NATID: MA03083) behind 66 South Street (Harodite Finishing Co.), Taunton/Dighton to mouth at confluence with the Taunton River, Taunton/Dighton (formerly part of 2004 segment: Three Mile River MA62-16).	0.02	Square Miles	Fecal Coliform	40310
Ten Mile						
Whiting Pond	MA52042	North Attleborough/Plainville.	24.00	Acres	Mercury in Fish Tissue	33880
Westfield						
Buckley-Dunton Lake	MA32013	Becket.	154.00	Acres	Mercury in Fish Tissue	42411



Category 4b waters - "Impairment controlled by alternative pollution control requirements"

According to the EPA guidance, Category 4b lists waters impaired by one or more pollutants; however, pollution control measures other than TMDLs are expected to attain all designated uses. Massachusetts is not including any waters in Category 4b for the 2018/2020 listing cycle.

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Category 4c waters listed alphabetically by major watershed
"Impairment not caused by a pollutant – TMDL not required"

Waterbody	AU_ID	Description	Size	Units	Impairment
Blackstone					
Brierly Pond	MA51010	Millbury.	18.00	Acres	(Aquatic Plants (Macrophytes)*) (Non-Native Aquatic Plants*)
Coes Reservoir	MA51024	Worcester.	87.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*) (Water Chestnut*)
Dark Brook Reservoir	MA51035	[South Basin] Auburn.	58.00	Acres	(Brittle Naiad, Najas Minor*) (Eurasian Water Milfoil, Myriophyllum Spicatum*)
Dark Brook Reservoir	MA51036	[North Basin] Auburn.	171.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
Girard Pond	MA51053	Sutton.	2.00	Acres	(Fanwort*)
Howe Reservoirs	MA51070	[East Basin] Millbury.	2.00	Acres	(Dewatering*)
Ironstone Reservoir	MA51074	Uxbridge.	28.00	Acres	(Fanwort*)
Jenks Reservoir	MA51075	Bellingham.	26.00	Acres	(Non-Native Aquatic Plants*)
Mill Pond	MA51104	Upton.	10.00	Acres	(Fanwort*) (Non-Native Aquatic Plants*)
Miscoe Lake	MA51106	Wrentham (size indicates portion in Massachusetts) (entire portion in MA is from 1000 feet upstream of the state line, these interstate surface waters are public water supply in Rhode Island and designated in MA as Class A/PWS/ORW).	5.00	Acres	(Fanwort*)
Newton Pond	MA51110	Shrewsbury/Boylston.	54.00	Acres	(Fanwort*) (Non-Native Aquatic Plants*)
North Pond	MA51112	Hopkinton/Milford.	231.00	Acres	(Brittle Naiad, Najas Minor*) (Fanwort*) (Non-Native Aquatic Plants*)
Pratt Pond	MA51123	Upton.	40.00	Acres	(Fanwort*) (Non-Native Aquatic Plants*)
Riverlin Street Pond	MA51137	Millbury.	2.00	Acres	(Curly-leaf Pondweed*) (Non-Native Aquatic Plants*)
Rivulet Pond	MA51138	Uxbridge.	4.00	Acres	(Non-Native Aquatic Plants*)
Sibley Reservoir	MA51148	Sutton.	25.00	Acres	(Dewatering*)
Silver Lake	MA51150	Bellingham.	42.00	Acres	(Non-Native Aquatic Plants*)
Silver Lake	MA51151	Grafton.	25.00	Acres	(Water Chestnut*)
Singletary Pond	MA51152	Sutton/Millbury.	341.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
Stevens Pond	MA51159	Sutton.	85.00	Acres	(Fanwort*)
Swans Pond	MA51164	Sutton/Northbridge.	32.00	Acres	(Non-Native Aquatic Plants*)



Category 4c waters listed alphabetically by major watershed
"Impairment not caused by a pollutant – TMDL not required"

Waterbody	AU_ID	Description	Size	Units	Impairment
Taft Pond	MA51165	Upton.	11.00	Acres	(Non-Native Aquatic Plants*)
Tinker Hill Pond	MA51167	Auburn.	37.00	Acres	(Brittle Naiad, Najas Minor*)
Tuckers Pond	MA51169	Sutton.	26.00	Acres	(Non-Native Aquatic Plants*)
Whitins Pond	MA51180	Northbridge/Sutton.	163.00	Acres	(Fanwort*)
					(Non-Native Aquatic Plants*)
					(Non-Native Fish/Shellfish/Zooplankton*)
					(Water Chestnut*)
Boston Harbor: Mystic					
Hills Pond	MA71018	Arlington.	2.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
Boston Harbor: Neponset					
Billings Street/East Street Pond	MA73065	Sharon.	2.00	Acres	(Non-Native Aquatic Plants*)
Clark Pond	MA73008	Walpole.	7.00	Acres	(Non-Native Aquatic Plants*)
					(Water Chestnut*)
Ellis Pond	MA73018	Norwood.	17.00	Acres	(Fanwort*)
Farrington Pond	MA73040	Stoughton.	3.00	Acres	(Non-Native Aquatic Plants*)
Glen Echo Pond	MA73022	Canton/Stoughton.	16.00	Acres	(Non-Native Aquatic Plants*)
Jewells Pond	MA73026	Medfield.	4.00	Acres	(Non-Native Aquatic Plants*)
Pinewood Pond	MA73039	Stoughton.	25.00	Acres	(Aquatic Plants (Macrophytes)*)
					(Non-Native Aquatic Plants*)
Town Pond	MA73056	Stoughton.	8.00	Acres	(Fanwort*)
Turner Pond	MA73058	Walpole.	18.00	Acres	(Fanwort*)
Woods Pond	MA73055	Stoughton.	14.00	Acres	(Non-Native Aquatic Plants*)
Boston Harbor: Weymouth & Weir					
Great Pond	MA74012	Randolph/Braintree (portion between the Great Pond Upper Reservoir Dam (NATID: MA00823) and outlet at Great Pond Dam (NATID: MA00828), Braintree).	198.00	Acres	(Fish Passage Barrier*)
Smelt Brook	MA74-24	Headwaters outlet Smelt Brook Pond, Braintree to mouth at confluence with Weymouth Fore River, Braintree/Weymouth (portions culverted).	1.10	Miles	(Fish Passage Barrier*)
Smelt Brook Pond	MA74018	Braintree (locally 'Pond Meadow' pond).	23.00	Acres	(Fish Passage Barrier*)
Sunset Lake	MA74020	Braintree.	58.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
Buzzards Bay					
Federal Pond	MA95055	Carver/Plymouth.	122.00	Acres	(Non-Native Aquatic Plants*)
Fresh Meadow Pond	MA95174	Carver/Plymouth.	59.00	Acres	(Non-Native Aquatic Plants*)
Mill Pond	MA95105	Wareham.	149.00	Acres	(Non-Native Aquatic Plants*)
White Island Pond, East Basin	MA95166	(East Basin) Plymouth/Wareham.	165.00	Acres	(Non-Native Aquatic Plants*)



Category 4c waters listed alphabetically by major watershed
"Impairment not caused by a pollutant – TMDL not required"

Waterbody	AU_ID	Description	Size	Units	Impairment
White Island Pond, West Basin	MA95173	(West Basin) Plymouth/Wareham.	123.00	Acres	(Non-Native Aquatic Plants*)
Cape Cod					
Black Pond	MA96017	Brewster/Harwich.	9.00	Acres	(Fish Passage Barrier*)
Depot Pond	MA96061	Eastham.	26.00	Acres	(Fish Passage Barrier*)
Hamblins Brook	MA96-133	Headwaters, outlet Miss Thatchers Pond, Yarmouth to mouth at inlet Mill Pond, Yarmouth.	0.60	Miles	(Fish Passage Barrier*)
Hinckleys Pond	MA96140	Harwich.	164.00	Acres	(Curly-leaf Pondweed*)
Lake Elizabeth	MA96080	Barnstable.	6.00	Acres	(Fish Passage Barrier*)
Long Pond	MA96184	Barnstable.	48.00	Acres	(Non-Native Aquatic Plants*)
Miss Thachers Pond	MA96258	Yarmouth.	6.00	Acres	(Fish Passage Barrier*)
Sesuit Creek	MA96-130	Headwaters outlet Scargo Lake, Dennis to salt water portion approximately 650 feet downstream from Route 6A, Dennis.	0.60	Miles	(Fish Passage Barrier*)
Unnamed Tributary	MA96-128	Unnamed tributary to Long Pond, headwaters outlet Wequaquet Lake at dam (NATID# MA02391), Barnstable to mouth at inlet Long Pond, Barnstable.	0.30	Miles	(Fish Passage Barrier*)
Unnamed Tributary	MA96-129	Unnamed tributary to Ryder Cove, headwaters outlet Stillwater Pond, Chatham to mouth at inlet Ryder Cove, Chatham.	0.20	Miles	(Fish Passage Barrier*)
Unnamed Tributary	MA96-132	Unnamed tributary to unnamed tributary to Centerville River, headwaters outlet Lake Elizabeth, Barnstable to salt water portion approximately 125 feet upstream from Prospect Avenue, Barnstable.	0.20	Miles	(Fish Passage Barrier*)
Charles					
Beaver Pond	MA72006	Franklin.	32.00	Acres	(Fanwort*) (Non-Native Aquatic Plants*)
Dug Pond	MA72034	Natick.	50.00	Acres	(Curly-leaf Pondweed*)
Kingsbury Pond	MA72056	Norfolk.	15.00	Acres	(Dewatering*)
Lake Archer	MA72002	Wrentham.	77.00	Acres	(Non-Native Aquatic Plants*)
Lake Waban	MA72125	Wellesley.	109.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*) (Fanwort*) (Non-Native Aquatic Plants*)
Louisa Lake	MA72068	Milford.	8.00	Acres	(Non-Native Aquatic Plants*)
Morses Pond	MA72079	Wellesley/Natick.	112.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*) (Fanwort*) (Non-Native Aquatic Plants*)
Noannet Pond	MA72084	Westwood/Dover.	50.00	Acres	(Non-Native Aquatic Plants*)
Nonesuch Pond	MA72085	Natick/Weston.	39.00	Acres	(Curly-leaf Pondweed*)



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Waterbody	AU_ID	Description	Size	Units	Impairment
Scarboro Golf Course Pond	MA72107	Boston.	6.00	Acres	(Non-Native Aquatic Plants*)
Unnamed Tributary	MA72-27	Headwaters, outlet Stony Brook Reservoir, Waltham/Weston to mouth at confluence with the Charles River, Waltham/Weston.	0.20	Miles	(Dewatering*) (Flow Regime Modification*)
Chicopee					
Beaver Lake	MA36010	Ware.	150.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*) (Non-Native Aquatic Plants*)
Brooks Pond	MA36023	North Brookfield/New Braintree/Spencer/Oakham.	179.00	Acres	(Non-Native Aquatic Plants*)
Chicopee Reservoir	MA36033	Chicopee.	22.00	Acres	(Non-Native Aquatic Plants*)
Cusky Pond	MA36045	New Braintree.	28.00	Acres	(Water Chestnut*)
Dean Pond	MA36049	Brimfield/Monson.	10.00	Acres	(Non-Native Aquatic Plants*)
Forest Lake	MA36063	Palmer.	45.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
Moosehorn Pond	MA36097	Hubbardston.	67.00	Acres	(Non-Native Aquatic Plants*)
Old Reservoir	MA36114	Barre.	37.00	Acres	(Flow Regime Modification*)
Swift River	MA36-09	Outlet Winsor Dam (NATID: MA00588), Belchertown to Upper Bondsville Mill Dam (NATID: MA00560), Belchertown/Palmer.	5.60	Miles	(Non-Native Aquatic Plants*)
Swift River	MA36-10	Upper Bondsville Mill Dam (NATID: MA00560), Belchertown/Palmer to mouth at confluence with Ware River, Palmer.	3.90	Miles	(Non-Native Aquatic Plants*)
Turkey Hill Pond	MA36157	Rutland/Paxton.	90.00	Acres	(Non-Native Aquatic Plants*)
Ware River	MA36-04	Dam at South Barre Reservoir (NATID: MA00091), Barre to Wheelwright Pond Dam (NATID: MA00616), New Braintree/Hardwick (mileage includes length of braids).	4.90	Miles	(Non-Native Aquatic Plants*)
Concord (SuAsCo)					
Bartlett Pond	MA82007	Northborough.	52.00	Acres	(Curly-leaf Pondweed*) (Eurasian Water Milfoil, Myriophyllum Spicatum*) (Fanwort*) (Water Chestnut*)
Batemans Pond	MA82008	Concord.	25.00	Acres	(Non-Native Aquatic Plants*)
Chauncy Lake	MA82017	Westborough.	173.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
Clamshell Pond	MA82018	Clinton.	24.00	Acres	(Water Chestnut*)
Fisk Pond	MA82038	Natick.	62.00	Acres	(Non-Native Aquatic Plants*) (Water Chestnut*)
Framingham Reservoir #3	MA82046	Framingham.	222.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
Great Meadows Pond #3	MA82053	Concord.	53.00	Acres	(Water Chestnut*)



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Waterbody	AU_ID	Description	Size	Units	Impairment
Mill Brook	MA82A-20	Headwaters, outlet Crosby Pond, Concord to mouth at confluence with the Concord River, Concord.	2.70	Miles	(Habitat Assessment*)
North Great Meadows	MA82084	Concord.	73.00	Acres	(Water Chestnut*)
Rocky Pond	MA82095	Boylston.	62.00	Acres	(Non-Native Aquatic Plants*)
Unnamed Tributary	MA82A-31	Unnamed tributary to River Meadow Brook, outlet Elm Street Pond, Carlisle to mouth at confluence with River Meadow Brook, Chelmsford (through former 2014 segment: Russell Millpond MA82096 and excluding approximately 0.4 mile through existing segment: Meadow Pond MA82129) (formerly part of 2014 segment: Unnamed Tributary MA82A-21).	3.70	Miles	(Flow Regime Modification*) (Water Chestnut*)
Winning Pond	MA82123	Billerica.	22.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*) (Non-Native Aquatic Plants*) (Water Chestnut*)
Connecticut					
Cranberry Pond	MA34018	Sunderland.	28.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
Danks Pond	MA34019	Northampton/Easthampton.	3.00	Acres	(Water Chestnut*)
Ingraham Brook Pond	MA34037	Granby.	5.00	Acres	(Water Chestnut*)
Lake Bray	MA34013	Holyoke.	10.00	Acres	(Curly-leaf Pondweed*) (Water Chestnut*)
Lake Holland	MA34035	Belchertown.	11.00	Acres	(Fanwort*) (Non-Native Aquatic Plants*)
Lower Mill Pond	MA34048	Easthampton.	30.00	Acres	(Water Chestnut*)
Lower Van Horn Park Pond	MA34129	Springfield.	11.00	Acres	(Water Chestnut*)
Mill River Diversion	MA34-32	Headwaters, outlet Paradise Pond, Northampton to mouth at confluence with Oxbow (east of Old Springfield Road), Northampton (through former 2006 segment: Hulberts Pond MA34036).	2.50	Miles	(Water Chestnut*)
Oxbow Cutoff	MA34067	The waterbody north of Island Road and south of Oxbow Road (between Routes 91 and 5), Northampton.	49.00	Acres	(Water Chestnut*)
Whiting Street Reservoir	MA34101	Holyoke.	102.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*) (Water Chestnut*)
Deerfield					
Deerfield River	MA33-01	Outlet Sherman Reservoir Monroe/Rowe, to confluence with Cold River, Charlemont (through former segment, Lower Reservoir MA33028).	13.10	Miles	(Flow Regime Modification*)
Johnson Brook	MA33-131	Headwaters, west of Route 112 (Main Road) and northeast at Houghton Hill, Colrain to the mouth at confluence with North River, Colrain.	1.40	Miles	(Dewatering*)



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Waterbody	AU_ID	Description	Size	Units	Impairment
Farmington					
Benton Pond	MA31003	Otis.	61.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
Noyes Pond	MA31026	Tolland.	166.00	Acres	(Non-Native Aquatic Plants*)
French					
Bouchard Pond	MA42003	Leicester.	2.00	Acres	(Non-Native Aquatic Plants*)
Buffum Pond	MA42004	Charlton/Oxford.	23.00	Acres	(Non-Native Aquatic Plants*)
Cedar Meadow Pond	MA42009	Leicester.	140.00	Acres	(Non-Native Aquatic Plants*)
Granite Reservoir	MA42019	Charlton. (also known as South Charlton Reservoir)	207.00	Acres	(Non-Native Aquatic Plants*)
Larner Pond	MA42068	Dudley.	27.00	Acres	(Aquatic Plants (Macrophytes)*) (Non-Native Aquatic Plants*)
Low Pond	MA42033	Dudley.	4.00	Acres	(Non-Native Aquatic Plants*)
Mosquito Pond	MA42060	Dudley.	11.00	Acres	(Aquatic Plants (Macrophytes)*)
Packard Pond	MA42040	Dudley.	6.00	Acres	(Non-Native Aquatic Plants*)
Pierpoint Meadow Pond	MA42043	Dudley/Charlton.	95.00	Acres	(Non-Native Aquatic Plants*)
Sargent Pond	MA42049	Leicester.	65.00	Acres	(Non-Native Aquatic Plants*)
Shepherd Pond	MA42051	Dudley.	16.00	Acres	(Aquatic Plants (Macrophytes)*)
Housatonic					
Ashmere Lake	MA21005	Hinsdale/Peru.	294.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
Greenwater Pond	MA21044	Becket.	89.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
Karner Brook	MA21-39	From the Karner Brook Reservoir intake, Egremont to mouth at inlet Mill Pond, Egremont (formerly part of 2014 segment: Karner Brook MA21-16).	2.30	Miles	(Dewatering*)
Lake Averic	MA21006	Stockbridge.	38.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
Long Pond	MA21062	Great Barrington.	114.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
Long Pond Brook	MA21-14	Headwaters, outlet Long Pond, Great Barrington to mouth at confluence with Seekonk Brook, Great Barrington.	2.00	Miles	(Dewatering*)
Mansfield Pond	MA21065	Great Barrington.	28.00	Acres	(Curly-leaf Pondweed*) (Eurasian Water Milfoil, Myriophyllum Spicatum*)
Onota Brook	MA21-80	Headwaters outlet Onota Lake, Pittsfield to mouth at confluence with West Branch Housatonic River, Pittsfield.	1.40	Miles	(Habitat Assessment*)
Plunkett Reservoir	MA21082	Hinsdale.	73.00	Acres	(Brittle Naiad, Najas Minor*) (Eurasian Water Milfoil, Myriophyllum Spicatum*)



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Waterbody	AU_ID	Description	Size	Units	Impairment
Prospect Lake	MA21084	Egremont.	59.00	Acres	(Curly-leaf Pondweed*) (Non-Native Aquatic Plants*)
Richmond Pond	MA21088	Richmond/Pittsfield.	228.00	Acres	(Brittle Naiad, Najas Minor*) (Curly-leaf Pondweed*) (Eurasian Water Milfoil, Myriophyllum Spicatum*)
Shaker Mill Pond	MA21094	West Stockbridge.	27.00	Acres	(Curly-leaf Pondweed*) (Eurasian Water Milfoil, Myriophyllum Spicatum*) (Water Chestnut*)
Stevens Pond	MA21104	Monterey.	39.00	Acres	(Curly-leaf Pondweed*) (Eurasian Water Milfoil, Myriophyllum Spicatum*)
Thousand Acre Pond	MA21106	New Marlborough.	145.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
Unnamed Tributary	MA21-31	Unnamed tributary to the Housatonic River, locally known as "Laurel Brook", headwaters, outlet Laurel Lake, Lee to mouth at confluence with the Housatonic River, Lee.	0.80	Miles	(Zebra Mussel, Dreissena Polymorph*)
Willard Brook	MA21-30	Headwaters north of Salisbury Road, Sheffield to mouth at confluence with Hubbard Brook, Sheffield.	4.00	Miles	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
Windsor Brook	MA21-09	Headwaters, southeast of Fobes Hill (west of Savoy Hollow Road), Windsor to mouth at inlet Windsor Reservoir, Hinsdale.	6.10	Miles	(Dewatering*)
Hudson: Hoosic					
Berkshire Pond	MA11001	Lanesborough.	21.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
Cheshire Reservoir, Middle Basin	MA11018	[Middle Basin] Cheshire/Lanesborough.	186.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*) (Non-Native Aquatic Plants*)
Hoosic River	MA11-04	Adams WWTP discharge (NPDES: MA0100315), Adams to confluence with North Branch Hoosic River, North Adams.	5.40	Miles	(Alteration in stream-side or littoral vegetative covers*) (Flow Regime Modification*)
Paul Brook	MA11-20	Headwaters, outlet of Mt. Williams Reservoir, North Adams to mouth at confluence with unnamed tributary, Williamstown (includes former 1998 segment: Paul Brook MA11-14).	2.10	Miles	(Dewatering*)
Tophet Brook	MA11-19	Source west of Burnett Road, Savoy (in the Savoy Mountain State Forest) to mouth at confluence with the Hoosic River, Adams (includes former 1998 segment: Tophet Brook MA11-08).	6.20	Miles	(Alteration in stream-side or littoral vegetative covers*) (Flow Regime Modification*)
Ipswich					
Field Pond	MA92019	Andover.	57.00	Acres	(Non-Native Aquatic Plants*)



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Waterbody	AU_ID	Description	Size	Units	Impairment
Lower Four Mile Pond	MA92032	Boxford.	18.00	Acres	(Non-Native Aquatic Plants*)
Stevens Pond	MA92062	Boxford.	11.00	Acres	(Non-Native Aquatic Plants*)
Merrimack					
Lake Gardner	MA84018	Amesbury (size indicates portion in Massachusetts) (formerly part of 2000 segment: Powwow River MA84A-07).	96.00	Acres	(Fish Passage Barrier*)
Lake Mascuppig	MA84037	Tyngsborough/Dracut.	210.00	Acres	(Curly-leaf Pondweed*) (Fanwort*)
Millers					
Bourn-Hadley Pond	MA35008	Templeton.	26.00	Acres	(Aquatic Plants (Macrophytes)*)
Brazell Pond	MA35010	Templeton.	15.00	Acres	(Aquatic Plants (Macrophytes)*)
Depot Pond	MA35018	(Railroad Pond) Templeton.	15.00	Acres	(Aquatic Plants (Macrophytes)*)
Ellis Pond	MA35023	Athol.	88.00	Acres	(Aquatic Plants (Macrophytes)*) (Eurasian Water Milfoil, Myriophyllum Spicatum*) (Non-Native Aquatic Plants*)
Greenwood Pond	MA35026	Templeton.	12.00	Acres	(Aquatic Plants (Macrophytes)*)
South Athol Pond	MA35078	Athol.	83.00	Acres	(Aquatic Plants (Macrophytes)*) (Non-Native Aquatic Plants*)
Stoddard Pond	MA35083	Winchendon.	52.00	Acres	(Aquatic Plants (Macrophytes)*)
White Pond	MA35098	Athol.	63.00	Acres	(Non-Native Aquatic Plants*)
Mount Hope Bay (Shore)					
Cole River	MA61-03	Wood Street, Swansea to Route 6, Swansea.	1.60	Miles	(Fish Passage Barrier*)
Nashua					
Chaffin Pond	MA81017	Holden.	90.00	Acres	(Fanwort*) (Non-Native Aquatic Plants*)
Coachlace Pond	MA81019	Clinton.	31.00	Acres	(Curly-leaf Pondweed*) (Hydrilla*) (Non-Native Aquatic Plants*)
Crocker Pond	MA81025	Westminster.	101.00	Acres	(Non-Native Aquatic Plants*)
Dawson Pond	MA81028	Holden.	22.00	Acres	(Fanwort*) (Non-Native Aquatic Plants*)
Eagle Lake	MA81034	Holden.	56.00	Acres	(Non-Native Aquatic Plants*)
Flannagan Pond	MA81044	Ayer.	80.00	Acres	(Curly-leaf Pondweed*) (Fanwort*) (Non-Native Aquatic Plants*)
Lake Samoset	MA81116	Leominster.	35.00	Acres	(Non-Native Aquatic Plants*)
Lake Whalom	MA81154	Lunenburg/Leominster.	97.00	Acres	(Curly-leaf Pondweed*)



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Waterbody	AU_ID	Description	Size	Units	Impairment
					(Eurasian Water Milfoil, Myriophyllum Spicatum*) (Non-Native Aquatic Plants*)
Lancaster Millpond	MA81065	Clinton.	21.00	Acres	(Non-Native Aquatic Plants*)
Lower Crow Hill Pond	MA81026	Princeton/Westminster.	14.00	Acres	(Non-Native Aquatic Plants*)
Maple Spring Pond	MA81077	Holden.	38.00	Acres	(Non-Native Aquatic Plants*)
Nashua River	MA81-08	("South Branch" Nashua River) Headwaters, outlet Lancaster Millpond, Clinton to Clinton WWTP discharge (NPDES: MA0100404), Clinton.	2.80	Miles	(Non-Native Aquatic Plants*)
Paradise Pond	MA81097	Princeton.	61.00	Acres	(Non-Native Aquatic Plants*)
Robbins Pond	MA81111	Harvard.	11.00	Acres	(Curly-leaf Pondweed*)
Sandy Pond	MA81117	Ayer.	69.00	Acres	(Fanwort*) (Non-Native Aquatic Plants*)
Sawmill Pond	MA81118	Fitchburg/Westminster.	65.00	Acres	(Non-Native Aquatic Plants*)
South Meadow Pond	MA81129	[East Basin] Clinton.	37.00	Acres	(Curly-leaf Pondweed*) (Hydrilla*) (Non-Native Aquatic Plants*)
South Meadow Pond	MA81165	[West Basin] Clinton/Lancaster.	34.00	Acres	(Curly-leaf Pondweed*) (Hydrilla*) (Non-Native Aquatic Plants*)
Stuart Pond	MA81137	Sterling.	42.00	Acres	(Non-Native Aquatic Plants*)
Stump Pond	MA81171	Holden.	27.00	Acres	(Non-Native Aquatic Plants*)
The Quag	MA81170	Sterling.	32.00	Acres	(Brittle Naiad, Najas Minor*) (Non-Native Aquatic Plants*)
Unionville Pond	MA81143	Holden.	19.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*) (Non-Native Aquatic Plants*)
West Waushacum Pond	MA81153	Sterling.	111.00	Acres	(Brittle Naiad, Najas Minor*) (Non-Native Aquatic Plants*)
White Pond	MA81155	Lancaster/Leominster.	47.00	Acres	(Non-Native Aquatic Plants*)
Wyman Pond	MA81161	Westminster.	198.00	Acres	(Non-Native Aquatic Plants*)
North Coastal					
Days Pond	MA93092	Gloucester.	0.50	Acres	(Non-Native Aquatic Plants*)
Dykes Pond	MA93020	Gloucester.	107.00	Acres	(Fish Passage Barrier*)
Edgewater Office Park Pond	MA93094	Wakefield.	15.00	Acres	(Fanwort*) (Water Chestnut*)
First Pond	MA93081	Saugus (also known as Upper Griswold Pond).	4.00	Acres	(Fanwort*)
Griswold Pond	MA93029	Saugus.	13.00	Acres	(Fanwort*) (Non-Native Aquatic Plants*)



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Waterbody	AU_ID	Description	Size	Units	Impairment
Haskell Pond	MA93031	Gloucester.	58.00	Acres	(Fish Passage Barrier*)
Spring Pond	MA93072	Saugus.	8.00	Acres	(Fanwort*) (Non-Native Aquatic Plants*)
Swains Pond	MA93095	Melrose.	3.00	Acres	(Fanwort*)
Unnamed Tributary	MA93-65	Unnamed Tributary to Lily Pond, headwaters outlet Dykes Pond, Gloucester to mouth at inlet Lily Pond, Gloucester.	0.20	Miles	(Fish Passage Barrier*)
Walker Creek	MA93-61	Headwaters outlet Haskell Pond, Gloucester to tidal portion approximately 460 feet north of Route 133, Gloucester.	0.70	Miles	(Fish Passage Barrier*)
Parker					
Bull Brook Reservoir	MA91002	Ipswich.	7.00	Acres	(Fish Passage Barrier*)
Egypt River	MA91-13	Outlet Bull Brook Reservoir, Ipswich to tidally influenced area approximately 600 feet downstream from High Street (Route 1A), Ipswich.	0.30	Miles	(Fish Passage Barrier*)
Parker River	MA91-01	Source north of Silver Mine Road, Boxford to Parker River Dam#1 (NATID# MA00241) just upstream of Central Street, Newbury (excluding Sperry Pond segment MA91013, Rock Pond segment MA91012, Pentucket Pond segment MA91010, and Crane Pond segment MA91004).	12.30	Miles	(Dewatering*) (Fish Passage Barrier*)
State Street Pond	MA91014	Newburyport.	4.00	Acres	(Fanwort*)
Quinebaug					
Cedar Pond	MA41008	Sturbridge.	149.00	Acres	(Non-Native Aquatic Plants*)
Hamilton Reservoir	MA41019	Holland (size indicates portion in Massachusetts).	386.00	Acres	(Non-Native Aquatic Plants*)
Mill Brook	MA41-07	From inlet of Mill Road Pond, Brimfield to mouth at confluence with Quinebaug River, Brimfield (through former 2008 segment: Mill Road Pond MA41032).	4.70	Miles	(Non-Native Aquatic Plants*)
Railroad Pond	MA41058	Charlton.	7.00	Acres	(Non-Native Aquatic Plants*)
Sherman Pond	MA41046	Brimfield.	76.00	Acres	(Non-Native Aquatic Plants*)
Sylvestri Pond	MA41049	Dudley.	30.00	Acres	(Non-Native Aquatic Plants*)
Walker Pond	MA41052	Sturbridge.	104.00	Acres	(Non-Native Aquatic Plants*)
Shawsheen					
Gravel Pit Pond	MA83007	Andover (Hussey Brook Pond East).	5.00	Acres	(Non-Native Aquatic Plants*)
South Coastal					
Black Mountain Pond	MA94009	Marshfield.	17.00	Acres	(Non-Native Aquatic Plants*)
Briggs Reservoir	MA94019	Plymouth.	24.00	Acres	(Fanwort*)
Briggs Reservoir	MA94020	Plymouth.	17.00	Acres	(Fanwort*)
Cooks Pond	MA94027	Plymouth.	21.00	Acres	(Fanwort*) (Non-Native Aquatic Plants*)



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Waterbody	AU_ID	Description	Size	Units	Impairment
First Herring Brook	MA94-36	Headwaters, in South Swamp, Norwell to inlet Tack Factory Pond, Scituate (formerly part of 2014 segment: First Herring Brook MA94-25).	2.60	Miles	(Fish Passage Barrier*)
First Herring Brook	MA94-63	Outlet of unnamed pond (locally called 'Reservoir') to mouth at inlet of Old Oaken Bucket Pond, Scituate (formerly part of 2014 segment: First Herring Brook MA94-25).	0.50	Miles	(Fish Passage Barrier*)
Halls Brook	MA94-58	From the inlet of Blackwater Pond, Kingston to tidal portion east of Maple Street, Kingston.	1.10	Miles	(Fish Passage Barrier*)
Herring Brook	MA94-29	Headwaters, outlet Lily Pond, Cohasset to mouth at confluence with Aaron River, Cohasset.	0.30	Miles	(Fanwort*) (Non-Native Aquatic Plants*)
Indian Head Brook	MA94-49	Headwaters outlet Indian Head Pond, Hanson to inlet Wampatuck Pond, Hanson.	0.90	Miles	(Fish Passage Barrier*)
Indian Head Brook	MA94-50	Outlet Wampatuck Pond, Hanson to mouth at confluence with Indian Head River, Hanson.	2.10	Miles	(Fish Passage Barrier*)
Island Creek	MA94-46	Headwaters outlet Island Creek Pond, Duxbury to tidal portion south of Route 3A and west of Bryant Avenue, Duxbury (through former 2016 segment; Mill Pond MA94101).	1.00	Miles	(Fish Passage Barrier*)
Island Creek Pond	MA94073	Duxbury.	40.00	Acres	(Fanwort*) (Fish Passage Barrier*)
Island Pond	MA94075	[locally known as Great Island Pond] Plymouth.	80.00	Acres	(Fanwort*)
Jacobs Pond	MA94077	Norwell.	61.00	Acres	(Fanwort*) (Fish Passage Barrier*) (Non-Native Aquatic Plants*)
Long Island Pond	MA94088	Plymouth.	33.00	Acres	(Fanwort*) (Non-Native Aquatic Plants*)
Lorings Bogs Pond	MA94089	Duxbury.	33.00	Acres	(Non-Native Aquatic Plants*)
Lower Chandler Pond	MA94091	Duxbury/Pembroke.	37.00	Acres	(Fanwort*)
Pembroke Street South Pond	MA94117	Kingston.	6.00	Acres	(Fanwort*)
Reeds Millpond	MA94126	Kingston.	6.00	Acres	(Fanwort*)
Reservoir	MA94127	Pembroke.	16.00	Acres	(Flow Regime Modification*)
Reservoir	MA94186	Scituate (formerly part of 2014 segment: First Herring Brook MA94-25).	63.00	Acres	(Fish Passage Barrier*)
Russell Pond	MA94133	Kingston.	11.00	Acres	(Fanwort*) (Fish Passage Barrier*)
Second Herring Brook	MA94-26	Headwaters, outlet Turner Pond, Norwell (excluding the approximately 0.3 mile through Torrey Pond) to the tidal zone near a wooden walk bridge approximately 205 meters downstream from Second Herring Brook Pond Dam (NATID: MA02171), Norwell (area associated with North River Corridor designated as ORW).	1.60	Miles	(Fish Passage Barrier*)



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Waterbody	AU_ID	Description	Size	Units	Impairment
Smelt Pond	MA94184	Kingston.	45.00	Acres	(Fanwort*) (Fish Passage Barrier*) (Non-Native Aquatic Plants*)
Tack Factory Pond	MA94152	Scituate.	8.00	Acres	(Fish Passage Barrier*)
Third Herring Brook	MA94-27	Headwaters, outlet Jacobs Pond, Norwell/Hanover to mouth at confluence with North River, Norwell/Hanover (area associated with North River Corridor designated as ORW).	5.30	Miles	(Fish Passage Barrier*)
Torrey Pond	MA94157	Norwell.	19.00	Acres	(Fanwort*) (Fish Passage Barrier*)
Town Brook	MA94-42	Headwaters, outlet Billington Sea, Plymouth to just upstream of the Route 3A bridge, Plymouth (excluding the approximately 0.07 mile through Arms House Pond).	1.50	Miles	(Curly-leaf Pondweed*) (Non-Native Aquatic Plants*)
Unnamed Tributary	MA94-35	Unnamed tributary to Eel River, from outlet cranberry bog south of Valley Road, Plymouth to mouth at confluence with Eel River, Plymouth (through former 2014 segment: Forge Pond MA94036).	2.40	Miles	(Fish Passage Barrier*)
Unnamed Tributary	MA94-53	Unnamed tributary to Furnace Brook, headwaters outlet Russell Pond, Kingston to mouth at outlet of Soules Pond at headwaters of Furnace Brook, Kingston.	0.50	Miles	(Fish Passage Barrier*)
Unnamed Tributary	MA94-59	Unnamed tributary (locally known as 'Laundry Brook') to Jones River intersecting Brook Street, Kingston (segment includes distance through Lucas Pond).	0.20	Miles	(Fish Passage Barrier*)
Unnamed Tributary	MA94-61	Unnamed tributary to Bluefish River (locally considered a portion of Bluefish River), headwaters north of Surplus Street, Duxbury to tidal portion north of Harrison Street, Duxbury.	0.50	Miles	(Fish Passage Barrier*)
Upper Chandler Pond	MA94165	Duxbury/Pembroke.	8.00	Acres	(Non-Native Aquatic Plants*)
Taunton					
Assonet River	MA62-19	From Lakeville/Freetown corporate boundary to Tisdale Pond Dam (NATID: MA03049) (north of Route 79/Elm Street intersection), Freetown (through former 2016 segment: Forge Pond MA62072) (stream name changes from Cedar Swamp River at Lakeville/Freetown corporate boundary).	2.50	Miles	(Fish Passage Barrier*)
Barrowsville Pond	MA62007	Norton.	31.00	Acres	(Water Chestnut*)
Brockton Reservoir	MA62023	Avon.	89.00	Acres	(Fanwort*)
Carver Pond	MA62033	Bridgewater.	29.00	Acres	(Non-Native Aquatic Plants*)
Clear Pond	MA62041	Lakeville.	18.00	Acres	(Non-Native Aquatic Plants*)
Cleveland Pond	MA62042	Abington.	98.00	Acres	(Fanwort*)
Crocker Pond	MA62051	Wrentham.	17.00	Acres	(Curly-leaf Pondweed*)
Cushing Pond	MA62056	Abington.	6.00	Acres	(Fanwort*)
East Freetown Pond	MA62063	Freetown.	11.00	Acres	(Non-Native Aquatic Plants*)



Category 4c waters listed alphabetically by major watershed
"Impairment not caused by a pollutant – TMDL not required"

Waterbody	AU_ID	Description	Size	Units	Impairment
Fall Brook	MA62-72	Headwaters, outlet Tispaquin Pond, Middleborough to mouth at confluence with Nemasket River, Lakeville.	3.80	Miles	(Fish Passage Barrier*)
Forge River	MA62-37	Headwaters, outlet Kings Pond, Raynham to mouth at confluence with the Taunton River, Raynham.	2.50	Miles	(Fish Passage Barrier*)
Fuller Street Pond	MA62234	Middleborough/Carver (formerly reported as 2004 segment: Fuller Street Pond MA95058).	20.00	Acres	(Non-Native Aquatic Plants*)
Furnace Brook	MA62-73	Headwaters outlet Lake Rico, Taunton to mouth at confluence with the Taunton River, Raynham.	1.10	Miles	(Fish Passage Barrier*)
Gavins Pond	MA62077	Sharon/Foxborough.	18.00	Acres	(Non-Native Aquatic Plants*)
Gushee Pond	MA62084	Raynham.	27.00	Acres	(Fanwort*)
					(Fish Passage Barrier*)
					(Non-Native Aquatic Plants*)
Kings Pond	MA62101	Raynham.	13.00	Acres	(Fish Passage Barrier*)
Lake Mirimichi	MA62118	Plainville/Foxborough.	175.00	Acres	(Fanwort*)
Lake Rico	MA62148	Taunton (portion formerly reported as 2000 lake segment: King Pond MA62102).	188.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
					(Fanwort*)
					(Fish Passage Barrier*)
Long Pond	MA62108	Lakeville/Freetown.	1,728.00	Acres	(Fanwort*)
					(Non-Native Aquatic Plants*)
Longwater Pond	MA62109	Easton.	8.00	Acres	(Non-Native Aquatic Plants*)
Lower Porter Pond	MA62111	Brockton.	8.00	Acres	(Fanwort*)
Middle Pond	MA62115	Taunton.	26.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
					(Fanwort*)
Mount Hope Mill Pond	MA62122	Taunton/Dighton (formerly part of 2014 segment: Three Mile River MA62-56 [MA62-16 (2004)]) (portion formerly reported as 2004 lake segment: Three Mile River Impoundment MA62231).	45.00	Acres	(Fanwort*)
					(Fish Passage Barrier*)
Muddy Cove Brook	MA62-59	From outlet Muddy Cove Brook Pond, Dighton to outlet of small impoundment behind 333 Main Street (Zeneca Inc.), Dighton (formerly part of 2014 segment: Muddy Cove Brook MA62-52 [MA62-23 (2004)]).	0.20	Miles	(Fish Passage Barrier*)
Muddy Pond	MA62125	Carver.	61.00	Acres	(Fanwort*)
New Pond	MA62130	Easton.	18.00	Acres	(Fanwort*)
Oakland Pond	MA62136	Taunton.	38.00	Acres	(Fish Passage Barrier*)
Poquoy Brook	MA62-71	Headwaters, outlet Poquoy Brook Pond, Lakeville to mouth at confluence with the Taunton River, Taunton/Middleborough.	2.20	Miles	(Fish Passage Barrier*)
Poquoy Brook Pond	MA62146	Lakeville/Middleborough.	34.00	Acres	(Fish Passage Barrier*)



Category 4c waters listed alphabetically by major watershed
"Impairment not caused by a pollutant – TMDL not required"

Waterbody	AU_ID	Description	Size	Units	Impairment
Queset Brook	MA62-67	Headwaters, outlet Ames Long Pond, Easton to inlet Longwater Pond, Easton (through former 2014 segment: Shovelshop Pond MA62172) (formerly part of 2014 segment: Queset Brook MA62-21).	1.50	Miles	(Non-Native Aquatic Plants*)
Richmond Pond	MA62159	Taunton.	6.00	Acres	(Fanwort*)
Rumford River	MA62-62	Headwaters, outlet Gavins Pond, Sharon to inlet Glue Factory Pond, Foxborough (through former 2014 segment: Vandys Pond MA62112) (formerly part of 2014 segment: Rumford River MA62-39 [MA62-15 (2004)]).	2.80	Miles	(Non-Native Aquatic Plants*)
Savery Pond	MA62167	Middleborough.	24.00	Acres	(Fanwort*)
Segreganset River	MA62-53	Source in wetland north of Glebe Street, Taunton to the Montaup Pond Dam (NATID: MA02104), Dighton (formerly part of 2004 segment: Segreganset River MA62-18) (through former 2014 lake segment: Segreganset River Ponds MA62169).	7.80	Miles	(Dewatering*) (Fish Passage Barrier*)
Segreganset River	MA62-54	From Montaup Pond Dam (NATID: MA02104), Dighton to approximately 250 feet north of Brook Street, Dighton (formerly part of 2004 segment: Segreganset River MA62-18).	0.30	Miles	(Dewatering*) (Fish Passage Barrier*)
Thirtyacre Pond	MA62190	Brockton.	26.00	Acres	(Fanwort*)
Threemile River	MA62-56	Confluence of Wading and Rumford rivers, Norton to dam (NATID: MA03083) behind 66 South Street (Harodite Finishing Co.), Taunton (excluding the approximately 0.5 mile through Oakland Pond segment MA62136 and the approximately 1.0 mile through Mount Hope Mill Pond segment MA62122) (formerly part of 2004 segment: Three Mile River MA62-16).	10.50	Miles	(Fish Passage Barrier*)
Town River	MA62-11	Headwaters, outlet Lake Nippenicket, Bridgewater to Route 28 bridge, West Bridgewater.	4.50	Miles	(Fish Passage Barrier*)
Town River	MA62-12	Route 28 bridge, West Bridgewater to Bridgewater WWTP (NPDES: MA0100641) discharge, Bridgewater.	3.90	Miles	(Fish Passage Barrier*)
Town River	MA62-13	From Bridgewater WWTP (NPDES: MA0100641) discharge, Bridgewater to mouth at confluence with the Matfield River forming headwaters Taunton River, Bridgewater.	2.30	Miles	(Non-Native Aquatic Plants*)
Turnpike Lake	MA62198	Plainville.	99.00	Acres	(Fanwort*) (Non-Native Aquatic Plants*)
Unnamed Tributary	MA62-70	Unnamed Tributary to Forge River, headwaters outlet Gushee Pond, Raynham to mouth at confluence with Forge River, Raynham (through former 2016 segments: Hewitt Pond MA62088 and Johnson Pond MA62097).	3.30	Miles	(Fanwort*) (Fish Passage Barrier*)
Upper Porter Pond	MA62200	Brockton.	11.00	Acres	(Fanwort*)



Category 4c waters listed alphabetically by major watershed
"Impairment not caused by a pollutant – TMDL not required"

Waterbody	AU_ID	Description	Size	Units	Impairment
Wading River	MA62-60	From Balcolm Street, Mansfield to inlet Barrowsville Pond, Norton (through former 2014 segment: Sweets Pond MA62185) (formerly part of 2014 segment: Wading River MA62-49 [MA62-17 (2004)]).	5.80	Miles	(Non-Native Aquatic Plants*)
Waldo Lake	MA62201	Avon/Brockton.	72.00	Acres	(Fanwort*)
Weir Village North Pond	MA62206	west of Carriage Lane, Taunton.	17.00	Acres	(Fish Passage Barrier*)
West Meadow Pond	MA62208	West Bridgewater.	104.00	Acres	(Non-Native Aquatic Plants*)
Winnecunnet Pond	MA62213	Norton.	150.00	Acres	(Fanwort*)
Ten Mile					
Falls Pond, South Basin	MA52014	North Attleborough.	50.00	Acres	(Non-Native Aquatic Plants*)
Orrs Pond	MA52029	Attleboro.	58.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)
Westfield					
Blair Pond	MA32009	Blandford.	69.00	Acres	(Non-Native Aquatic Plants*)
Center Pond	MA32015	Becket.	114.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)

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Category 5 waters listed alphabetically by major watershed
The 303(d) List – “Waters requiring a TMDL”

Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Blackstone						
Aldrich Pond	MA51002	Sutton.	2.00	Acres	(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
Arcade Pond	MA51003	Northbridge.	20.00	Acres	(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Algae	
Arnolds Brook	MA51-32	Headwaters, perennial portion, from outlet of unnamed pond at Whitehall Way, Bellingham to mouth at confluence with Peters River, Bellingham.	1.70	Miles	Escherichia Coli (E. Coli)	
Bacon Brook	MA51-41	Outlet Ironstone Reservoir, Uxbridge to mouth at confluence with the Blackstone River, Uxbridge.	0.60	Miles	Temperature	
Beaver Brook	MA51-07	Outlet of small unnamed impoundment north of Beth Israel School and Flag Street School, Worcester to mouth at confluence with Middle River, Worcester (includes underground portion).	2.90	Miles	(Fish Kill(s)*)	
					(Physical substrate habitat alterations*)	
					Bottom Deposits	
Blackstone River	MA51-03	Confluence of Middle River and Mill Brook (downstream of the railroad spur bridge west of Tobias Boland Way), Worcester to Fisherville Pond Dam (NATID: MA00577), Grafton (through a portion of former 2008 segment: Fisherville Pond MA51048) (mileage includes length of braid).	10.40	Miles	Escherichia Coli (E. Coli)	
					(Curly-leaf Pondweed*)	
					(Debris*)	
					(Flow Regime Modification*)	
					(Non-Native Aquatic Plants*)	
					(Physical substrate habitat alterations*)	
					Algae	
					Benthic Macroinvertebrates	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	
					Fish Bioassessments	
					Flocculant Masses	
					Lead	
					Nutrient/Eutrophication Biological Indicators	
					Odor	
					Oil and Grease	
					Phosphorus, Total	
					Scum/Foam	
					Sedimentation/Siltation	
					Trash	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Blackstone River	MA51-04	From Fisherville Pond Dam (NATID: MA00577), Grafton to Rice City Pond Dam (NATID: MA00935), Uxbridge (through former 2008 segments: Riverdale Impoundment MA51136 and Rice City Pond MA51131).	8.80	Miles	Turbidity	
					(Aquatic Plants (Macrophytes)*)	
					(Flow Regime Modification*)	
					(Non-Native Aquatic Plants*)	
					(Physical substrate habitat alterations*)	
					(Water Chestnut*)	
					Algae	
					Benthic Macroinvertebrates	
					Cadmium	
					Copper	
					DDT in Fish Tissue	
					Escherichia Coli (E. Coli)	
					Fish Bioassessments	
					Lead	
					Nutrient/Eutrophication Biological Indicators	
					Odor	
					PCBs in Fish Tissue	
					Phosphorus, Total	
					Sedimentation/Siltation	
					Turbidity	
Blackstone River	MA51-05	From outlet Rice City Pond Dam (NATID: MA00935), Uxbridge to the most downstream railroad trestle crossing, Millville.	9.10	Miles	(Aquatic Plants (Macrophytes)*)	
					(Flow Regime Modification*)	
					(Non-Native Aquatic Plants*)	
					Algae	
					Benthic Macroinvertebrates	
					Cadmium	
					Copper	
					Escherichia Coli (E. Coli)	
					Lead	
					Nutrient/Eutrophication Biological Indicators	
					Odor	
					Phosphorus, Total	
					Polychlorinated Biphenyls (PCBs)	
					Total Suspended Solids (TSS)	
					Turbidity	



Category 5 waters listed alphabetically by major watershed
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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Blackstone River	MA51-06	From the most downstream railroad trestle crossing, Millville to the Rhode Island border west of Route 122, Blackstone (mileage includes length of braid).	3.80	Miles	(Flow Regime Modification*)	
					Cadmium	
					Copper	
					DDT in Fish Tissue	
					Escherichia Coli (E. Coli)	
					Fish Bioassessments	
					Lead	
					PCBs in Fish Tissue	
					Phosphorus, Total	
					Total Suspended Solids (TSS)	
Burncoat Park Pond	MA51012	Worcester.	6.00	Acres	Aquatic Plants (Macrophytes)	
					Turbidity	
Cedar Swamp Brook	MA51-33	Headwaters, outlet Cedar Swamp, Uxbridge to mouth at confluence with Chockalog River, Douglas.	0.80	Miles	Fish Bioassessments	
Center Brook	MA51-34	From outlet Mill Pond, Upton to mouth at confluence with West River, Upton.	2.80	Miles	Temperature	
Coal Mine Brook	MA51-27	Headwaters, perennial portion, west of Plantation Street, Worcester to mouth at inlet Lake Quinsigamond, Worcester.	0.40	Miles	(Fish Kill(s)*)	
					Escherichia Coli (E. Coli)	
					Fish Bioassessments	
					Sedimentation/Siltation	
Cook Allen Brook	MA51-28	Headwaters, outlet Reservoir No. 5, Sutton to mouth at inlet Whitins Pond, Northbridge (excluding approximately 0.2 mile through concurrent segment, Reservoir No. 4 MA51128).	2.00	Miles	Temperature	
					Fish Bioassessments	
Cronin Brook	MA51-45	Headwaters, perennial portion west of Potter Hill Road, Grafton to mouth at confluence with the Blackstone River, Grafton.	2.60	Miles	Escherichia Coli (E. Coli)	
					Temperature	
Crystal Lake	MA51031	Douglas.	96.00	Acres	Mercury in Fish Tissue	
Dark Brook	MA51-16	Headwaters, outlet Eddy Pond, Auburn to mouth at confluence with Kettle Brook, Auburn (through former 2008 segment: Auburn Pond MA51004).	2.50	Miles	(Fanwort*)	
					Benthic Macroinvertebrates	
					Chloride	
					Escherichia Coli (E. Coli)	
Fish Pond	MA51047	Northbridge.	8.00	Acres	(Curly-leaf Pondweed*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Fox Brook	MA51-39	Headwaters, perennial portion, northeast of Thayer Street, Millville to mouth at confluence with the Blackstone River, Blackstone (excluding approximately 0.1 mile through existing segment: Crane Pond MA51030).	3.40	Miles	Escherichia Coli (E. Coli)	
Hayes Pond	MA51060	Grafton.	5.00	Acres	(Fanwort*)	
					Aquatic Plants (Macrophytes)	
Kettle Brook	MA51-01	Outlet Kettle Brook Reservoir #1, Leicester to inlet Leesville Pond, Auburn (as of 2010 excluding the approximately 0.4 miles through segment; Waite Pond MA51170) (through former 2010 segments: City Pond MA51021, Smiths Pond MA51156, and Stoneville Pond MA51160).	7.00	Miles	(Dewatering*)	
					(Fanwort*)	
					Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	
Lake Quinsigamond	MA51125	Shrewsbury/Worcester.	474.00	Acres	(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					(Water Chestnut*)	
					Algae	644
					Dissolved Oxygen	644
					Enterococcus	
Lake Ripple	MA51135	Grafton.	47.00	Acres	(Fanwort*)	
					(Water Chestnut*)	
					Aquatic Plants (Macrophytes)	
Manchaug Pond	MA51091	Douglas/Sutton.	364.00	Acres	(Curly-leaf Pondweed*)	
					(Fanwort*)	
					Dissolved Oxygen	
					Mercury in Fish Tissue	42392
Marble Pond	MA51093	Sutton.	8.00	Acres	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
Middle River	MA51-02	Headwaters, outlet Coes Pond, Worcester to confluence with the unnamed tributary locally known as "Mill Brook" (downstream of the railroad spur bridge west of Tobias Boland Way), Worcester (through former 2000 segment: Middle River Pond MA51101) (prior to 2000 this segment did not include river between Coes and Curtis ponds).	3.40	Miles	(Debris*)	
					(Non-Native Aquatic Plants*)	
					(Physical substrate habitat alterations*)	
					Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	
					Nutrient/Eutrophication Biological Indicators	
					Trash	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Mill River	MA51-35	Headwaters, outlet North Pond, Milford/Upton to Mendon/Blackstone corporate boundary (through former 2008 segments: Fiske Millpond MA51049, Mill Pond (formerly known as Milford Street Pond) MA51102, Hopedale Pond MA51065 and Spindleville Pond MA51158) (formerly part of 2010 segment: Mill River MA51-10).	11.80	Miles	Turbidity	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Metals	
Mill River	MA51-36	From Mendon/Blackstone corporate boundary to 1000 feet upstream of the Rhode Island border, Blackstone (through former 2008 segment: Harris Pond MA51058) (formerly part of 2010 segment: Mill River MA51-10) (the lower 1000 feet represents "All Interstate surface waters that are public water supply in Rhode Island from 1000 feet upstream of the State Line" which are designated as Class A/PWS/ORW in 314CMR4.00, January 2007).	4.10	Miles	PCBs in Fish Tissue	
					(Fanwort*)	
Muddy Brook	MA51-40	Headwaters, outlet small unnamed pond north of Nipmuc Regional High School, Mendon to mouth at confluence with Mill River, Mendon.	5.10	Miles	Escherichia Coli (E. Coli)	
					Escherichia Coli (E. Coli)	
Mumford River	MA51-14	From Douglas WWTP discharge (NPDES: MA0101095), Douglas to mouth at confluence with Blackstone River, Uxbridge (through former 2008 segments: Gilboa Pond MA51052, Lackey Pond MA51083, Meadow Pond MA51193, Linwood Pond MA51088, Whitin Pond MA51178, and Caprons Pond MA51014).	9.40	Miles	(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					(Water Chestnut*)	
					Aquatic Plants (Macrophytes)	
Number 1 Pond	MA51114	Sutton.	9.00	Acres	Aquatic Plants (Macrophytes)	
					Turbidity	
Peters River	MA51-18	Headwaters, outlet Silver Lake, Bellingham to Rhode Island border east of Route 126, Bellingham.	4.00	Miles	Escherichia Coli (E. Coli)	
					Temperature	
Poor Farm Brook	MA51-17	Headwaters, West Boylston to the inlet of Shirley Street Pond, Shrewsbury (through former 2008 segment: City Farm Pond MA51020).	3.60	Miles	(Dewatering*)	
					Aquatic Plants (Macrophytes)	
					Escherichia Coli (E. Coli)	
					Temperature	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Quinsigamond River	MA51-09	Headwaters, outlet Flint Pond, Grafton to confluence with the Blackstone River in Fisherville Pond, Grafton (excluding approximately 0.5 mile through existing segment: Lake Ripple MA51135) (through former 2008 segments: Hovey Pond MA51068 and a portion of Fisherville Pond MA51048).	5.20	Miles	(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Benthic Macroinvertebrates	
Reservoir No. 6	MA51130	Sutton.	14.00	Acres	Mercury in Fish Tissue	
Riley Pond	MA51134	Northbridge.	7.00	Acres	Turbidity	
Sewall Brook	MA51-44	Headwaters, west of Baypath Drive, Boylston to inlet Sewall Pond, Boylston.	2.80	Miles	Temperature	
Singletary Brook	MA51-31	Headwaters, outlet Singletary Pond, Millbury to mouth at confluence with the Blackstone River, Millbury (excluding approximately 0.4 miles through existing segment: Brierly Pond MA51010).	1.50	Miles	Escherichia Coli (E. Coli)	
Sutton Falls	MA51163	Sutton.	11.00	Acres	Harmful Algal Blooms	
					Turbidity	
Tatnuck Brook	MA51-15	From outlet Holden Reservoir #2, Holden to inlet Coes Reservoir, Worcester (through former 2008 segments: Cook Pond MA51027 and Patch Reservoir MA51118).	3.30	Miles	(Fanwort*)	
					(Flow Regime Modification*)	
					Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	
					Sedimentation/Siltation	
Unnamed Tributary	MA51-08	(Also known as "Mill Brook") Headwaters, outlet Indian Lake, Worcester to mouth at confluence with Middle River (downstream of the railroad spur bridge west of Tobias Boland Way), Worcester (through former 2008 segment: Salisbury Pond MA51142).	5.60	Miles	(Debris*)	
					(Physical substrate habitat alterations*)	
					Ammonia, Un-ionized	
					Chloride	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Flocculant Masses	
					Metals	
					Nutrient/Eutrophication Biological Indicators	
					Odor	
					Oil and Grease	
					Other Organics	
					Scum/Foam	
					Sedimentation/Siltation	
					Trash	
					Turbidity	2319



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Unnamed Tributary	MA51-20	From the outlet of Leesville Pond, Worcester to the confluence with Middle River, Worcester (through former 2008 segments: Curtis Ponds [South Basin] MA51033 and [North Basin] MA51032).	1.40	Miles	(Debris*)	
					(Dewatering*)	
					(Fanwort*)	
					Nutrient/Eutrophication Biological Indicators	
					Sedimentation/Siltation	
					Trash	
Unnamed Tributary	MA51-38	Unnamed tributary to Dark Brook, from perennial portion near the Route 90, 290EB, 395SB, 12NB interchange, Auburn to mouth at confluence with the Dark Brook south of Water Street, Auburn (sections culverted).	0.80	Miles	Chloride	
Welsh Pond	MA51176	Sutton.	8.00	Acres	(Curly-leaf Pondweed*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
West River	MA51-11	Headwaters, outlet Silver Lake, Grafton to Upton WWTP discharge (NPDES: MA0100196), Upton (through former 2008 segment: Lake Wildwood MA51181).	3.70	Miles	(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Lack of a coldwater assemblage	
West River	MA51-12	From Upton WWTP discharge (NPDES: MA0100196), Upton to mouth at confluence with the Blackstone River, Uxbridge (through former 2008 segments: Harrington Pool MA51197 and West River Pond MA51177).	9.40	Miles	Temperature	
					(Curly-leaf Pondweed*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					(Water Chestnut*)	
Woodbury Pond	MA51185	Sutton.	5.00	Acres	Dissolved Oxygen	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
Woolshop Pond	MA51186	Millbury.	5.00	Acres	Aquatic Plants (Macrophytes)	
					(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					Aquatic Plants (Macrophytes)	
					Turbidity	
Boston Harbor (Proper)						
Boston Harbor	MA70-01	The area defined by a line from the southerly tip of Deer Island to Boston Lighthouse on Little Brewster Island, then south to Point Allerton; across Hull and West guts; across the mouths of Quincy and Dorchester bays, Boston Inner Harbor and Winthrop Bay (including President Roads and Nantasket Roads).	18.60	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Fecal Coliform	R1_MA_2019_01
					PCBs in Fish Tissue	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Boston Inner Harbor	MA70-02	From the Mystic and Chelsea rivers, Chelsea/Boston, to the line between Governors Island and Fort Independence, Boston (East Boston) (including Fort Point, Reserved and Little Mystic channels).	2.56	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Dissolved Oxygen	
					Enterococcus	R1_MA_2019_01
					Fecal Coliform	R1_MA_2019_01
					PCBs in Fish Tissue	
Dorchester Bay	MA70-03	From the mouth of the Neponset River, Boston/Quincy to the line between Head Island and the north side of Thompson Island and the line between the south point of Thompson Island, Boston and Chapel Rocks, Quincy.	3.46	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Enterococcus	R1_MA_2019_01
					Fecal Coliform	R1_MA_2019_01
					PCBs in Fish Tissue	
Hingham Bay	MA70-06	The area north of the mouth of the Weymouth Fore River extending on the west along the line between Nut Island and the south point of West Head, and on the east side along a line from Prince Head just east of Pig Rock to the mouth of the Weymouth Fore River (midway between Lower Neck and Manot Beach), Quincy.	0.96	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Fecal Coliform	R1_MA_2019_01
					PCBs in Fish Tissue	
Hingham Bay	MA70-07	The area defined between Peddocks Island and Windmill Point; from Windmill Point southeast to Bumkin Island; from Bumkin Island southeast to Sunset Point; from Sunset Point across the mouth of the Weir River to Worlds End; from Worlds End across the mouth of Hingham Harbor to Crow Point; from Beach Lane, Hingham across the mouth of the Weymouth Back River to Lower Neck; and from Lower Neck midway across the mouth of the Weymouth Fore River.	4.80	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Estuarine Bioassessments	
					Fecal Coliform	R1_MA_2019_01
					PCBs in Fish Tissue	
Hull Bay	MA70-09	The area defined east of a line from Windmill Point, Hull to Bumkin Island, Hull and from Bumkin Island to Sunset Point, Hull.	2.48	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Estuarine Bioassessments	
					Fecal Coliform	R1_MA_2019_01
					PCBs in Fish Tissue	
Pleasure Bay	MA70-11	A semi-enclosed bay, the flow restricted through two channels between Castle and Head islands, Boston.	0.22	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Fecal Coliform	R1_MA_2019_01
					PCBs in Fish Tissue	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Quincy Bay	MA70-04	From Bromfield Street near the Wollaston Yacht Club, northeast to N42 17.3 W71 00.1, then southeast to Houghs Neck near Sea Street and Peterson Road (formerly referred to as the "Willows"), Quincy.	1.51	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Enterococcus	R1_MA_2019_01
					Fecal Coliform	R1_MA_2019_01
					PCBs in Fish Tissue	
Quincy Bay	MA70-05	Quincy Bay, north of the class SA waters (segment MA70-04), Quincy to the line between Moon Head and Nut Island, Quincy.	4.43	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Enterococcus	R1_MA_2019_01
					Fecal Coliform	R1_MA_2019_01
					PCBs in Fish Tissue	
Winthrop Bay	MA70-10	From the tidal flats at Coleridge Street, Boston (East Boston) to a line between Logan International Airport and Point Shirley, Boston/Winthrop.	1.65	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Enterococcus	R1_MA_2019_01
					Fecal Coliform	R1_MA_2019_01
					PCBs in Fish Tissue	
Boston Harbor: Mystic						
Aberjona River	MA71-01	Source just south of Birch Meadow Drive, Reading to inlet Upper Mystic Lake at Mystic Valley Parkway, Winchester (portion culverted underground). (through former 2010 segments: Judkins Pond MA71021 and Mill Pond MA71031).	9.20	Miles	(Physical substrate habitat alterations*)	
					Ammonia, Un-ionized	
					Arsenic in Sediment	
					Benthic Macroinvertebrates	
					Chloride	
					Dissolved Oxygen	R1_MA_2020_5a
					Escherichia Coli (E. Coli)	R1_MA_2019_01
					Fish Bioassessments	
					Phosphorus, Total	R1_MA_2020_5a
					Sediment Bioassay [Chronic Toxicity Freshwater]	
Alewife Brook	MA71-20	From emergence north of Cambridgepark Drive, Cambridge to mouth at confluence with Mystic River, Arlington/Somerville (formerly part of 2016 segment: Alewife Brook MA71-04).	1.60	Miles	(Debris*)	
					(Water Chestnut*)	
					Chloride	
					Copper in Sediment	
					Dissolved Oxygen	R1_MA_2020_5a
					Escherichia Coli (E. Coli)	R1_MA_2019_01
					Flocculant Masses	
					Lead in Sediment	
					Odor	
					Oil and Grease	
					PCBs in Fish Tissue	
					Phosphorus, Total	R1_MA_2020_5a
					Scum/Foam	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
					Sediment Bioassay [Chronic Toxicity Freshwater]	
					Transparency / Clarity	
					Trash	
Belle Isle Inlet	MA71-14	From tidegate at Bennington Street, Boston/Revere to confluence with Winthrop Bay, Boston/Winthrop.	0.12	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Fecal Coliform	R1_MA_2019_01
					PCBs in Fish Tissue	
Blacks Nook	MA71005	Cambridge.	2.00	Acres	(Water Chestnut*)	
					Nutrient/Eutrophication Biological Indicators	
					Transparency / Clarity	
Chelsea River	MA71-06	From confluence with Mill Creek, Chelsea/Revere to confluence with Boston Inner Harbor, Chelsea/East Boston.	0.37	Square Miles	(Debris*)	
					Ammonia, Un-ionized	
					Cause Unknown [Contaminants in Fish and/or Shellfish; Sediment Screening Value (Exceedance)]	
					Fecal Coliform	R1_MA_2019_01
					Odor	
					PCBs in Fish Tissue	
					Petroleum Hydrocarbons	
					Trash	
					Turbidity	
Clay Pit Pond	MA71011	Belmont.	12.00	Acres	Chlordane in Fish Tissue	
Cummings Brook	MA71-10	Headwaters east of Wright Street, Woburn to confluence with Fowle Brook, Woburn.	2.10	Miles	Escherichia Coli (E. Coli)	
Ell Pond	MA71014	Melrose.	23.00	Acres	Chlorophyll-a	
					Fecal Coliform	
					Harmful Algal Blooms	
					Phosphorus, Total	
					Total Suspended Solids (TSS)	
					Transparency / Clarity	
Fellsmere Pond	MA71016	Malden.	5.00	Acres	Harmful Algal Blooms	
Horn Pond	MA71019	Woburn.	108.00	Acres	(Curly-leaf Pondweed*)	
					(Fish Passage Barrier*)	
					DDT in Fish Tissue	
					Dissolved Oxygen	
					Harmful Algal Blooms	
					Phosphorus, Total	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Little Pond	MA71024	Belmont.	18.00	Acres	(Water Chestnut*)	
					Harmful Algal Blooms	
Little River	MA71-21	Headwaters, outlet Little Pond, Belmont to MWRA CSO outfall (MWR003) approximately 150 feet upstream of mouth at the confluence with Alewife Brook, Cambridge (formerly part of 2016 segment: Alewife Brook MA71-04).	0.80	Miles	(Debris*)	
					(Water Chestnut*)	
					Chloride	
					Copper in Sediment	
					Dissolved Oxygen	R1_MA_2020_5a
					Escherichia Coli (E. Coli)	R1_MA_2019_01
					Flocculant Masses	
					Lead in Sediment	
					Odor	
					Oil and Grease	
					PCBs in Fish Tissue	
					Phosphorus, Total	R1_MA_2020_5a
					Scum/Foam	
					Transparency / Clarity	
					Trash	
Little River	MA71-22	From MWRA CSO outfall (MWR003, approximately 150 feet upstream of mouth), Cambridge to mouth at confluence with Alewife Brook, Cambridge (formerly part of 2016 segment: Alewife Brook MA71-04).	0.03	Miles	(Debris*)	
					Copper in Sediment	
					Dissolved Oxygen	R1_MA_2020_5a
					Escherichia Coli (E. Coli)	R1_MA_2019_01
					Flocculant Masses	
					Lead in Sediment	
					Odor	
					Oil and Grease	
					PCBs in Fish Tissue	
					Phosphorus, Total	R1_MA_2020_5a
					Scum/Foam	
					Transparency / Clarity	
					Trash	
Lower Mystic Lake	MA71027	Arlington/Medford.	93.00	Acres	DDT in Fish Tissue	
					Dissolved Oxygen	R1_MA_2020_5a
					Hydrogen Sulfide	
					PCBs in Fish Tissue	
					Salinity	
					Sediment Bioassay [Chronic Toxicity Freshwater]	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Malden River	MA71-05	From culverted portion south of Charles Street, Malden to confluence with Mystic River, Everett/Medford.	2.00	Miles	(Debris*)	
					(Water Chestnut*)	
					Chlordane in Fish Tissue	
					DDT in Fish Tissue	
					Dissolved Oxygen	R1_MA_2020_5a
					Dissolved Oxygen Supersaturation	R1_MA_2020_5a
					Escherichia Coli (E. Coli)	R1_MA_2019_01
					Fecal Coliform	
					Flocculant Masses	R1_MA_2020_5a
					Odor	
					Oil and Grease	
					PCBs in Fish Tissue	
					pH, High	
					Phosphorus, Total	R1_MA_2020_5a
					Scum/Foam	
					Sediment Bioassay [Chronic Toxicity Freshwater]	
					Temperature	
					Total Suspended Solids (TSS)	
					Transparency / Clarity	R1_MA_2020_5a
					Trash	
Mill Brook	MA71-07	Headwaters south of Massachusetts Avenue, Lexington to inlet of Lower Mystic Lake, Arlington (portions culverted underground).	3.90	Miles	(Physical substrate habitat alterations*)	
					Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	R1_MA_2019_01
Mill Creek	MA71-08	From Route 1, Chelsea/Revere to confluence with Chelsea River, Chelsea/Revere.	0.02	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Fecal Coliform	R1_MA_2019_01
					PCBs in Fish Tissue	
Munroe Brook	MA71-15	Headwaters, north of Solomon Pierce Road, Lexington to the mouth at inlet Arlington Reservoir, Lexington (includes culverted portion).	1.80	Miles	Escherichia Coli (E. Coli)	
Mystic River	MA71-02	Outlet Lower Mystic Lake, Arlington/Medford to Amelia Earhart Dam, Somerville/Everett.	5.00	Miles	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Non-Native Aquatic Plants*)	
					(Water Chestnut*)	
					Arsenic	
					Chlordane in Fish Tissue	
					Chlorophyll-a	R1_MA_2020_5a
					DDT in Fish Tissue	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
					Dissolved Oxygen	R1_MA_2020_5a
					Dissolved Oxygen Supersaturation	R1_MA_2020_5a
					Escherichia Coli (E. Coli)	R1_MA_2019_01
					PCBs in Fish Tissue	
					pH, High	
					Phosphorus, Total	R1_MA_2020_5a
					Sediment Bioassay [Chronic Toxicity Freshwater]	
					Transparency / Clarity	R1_MA_2020_5a
Mystic River	MA71-03	Amelia Earhart Dam, Somerville/Everett to confluence with Boston Inner Harbor, Chelsea/Charlestown (Includes Island End River).	0.49	Square Miles	Ammonia, Un-ionized	
					Cause Unknown [Contaminants in Fish and/or Shellfish; Sediment Screening Value (Exceedance)]	
					Dissolved Oxygen	R1_MA_2020_5a
					Fecal Coliform	R1_MA_2019_01
					Flocculant Masses	R1_MA_2020_5a
					Nutrient/Eutrophication Biological Indicators	R1_MA_2020_5a
					Odor	
					Oil and Grease	
					PCBs in Fish Tissue	
					Petroleum Hydrocarbons	
					Scum/Foam	
					(Fish Passage Barrier*)	
Pond Brook	MA71-16	Headwaters, outlet Horn Pond, Woburn to mouth at inlet Wedge Pond, Winchester.	1.00	Miles	Benthic Macroinvertebrates	
Shaker Glen Brook	MA71-11	Headwaters, west of Dix Road Extention, Woburn to confluence with Fowle Brook, Woburn (portion culverted underground).	1.50	Miles	Escherichia Coli (E. Coli)	
Spy Pond	MA71040	Arlington.	98.00	Acres	(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Water Chestnut*)	
					Chlordane in Fish Tissue	
					DDT in Fish Tissue	
					Dissolved Oxygen	
					Harmful Algal Blooms	
					Phosphorus, Total	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Unnamed Tributary	MA71-19	Unnamed tributary to Little River (locally known as 'Wellington Brook'), headwaters south of Trapelo Road, Belmont to inlet Claypit Pond, Belmont (portions culverted underground) (1893 Boston USGS quad used to delineate stream).	2.10	Miles	Benthic Macroinvertebrates	
Upper Mystic Lake	MA71043	Winchester/Arlington/Medford.	176.00	Acres	(Curly-leaf Pondweed*)	
					Dissolved Oxygen	R1_MA_2020_5a
					Dissolved Oxygen Supersaturation	R1_MA_2020_5a
					Enterococcus	
Wedge Pond	MA71045	Winchester.	23.00	Acres	Dissolved Oxygen	
					Harmful Algal Blooms	
					Phosphorus, Total	
Winter Pond	MA71047	Winchester.	19.00	Acres	(Non-Native Aquatic Plants*)	
					Nutrient/Eutrophication Biological Indicators	
Boston Harbor: Neponset						
Beaver Brook	MA73-19	Headwaters (perennial portion), near Moose Hill Street, Sharon through Sawmill Pond to mouth at confluence with Massapoag Brook, Sharon.	3.50	Miles	Benthic Macroinvertebrates	
					Dissolved Oxygen	
Beaver Meadow Brook	MA73-20	Headwaters, outlet of Glenn Echo Pond, Stoughton, to mouth at inlet of Bolivar Pond, Canton.	3.30	Miles	Dissolved Oxygen	
					Escherichia Coli (E. Coli)	2592
Bolivar Pond	MA73005	Canton.	20.00	Acres	(Fanwort*)	
					Turbidity	
Bubbling Brook	MA73-11	Headwaters (perennial portion), near North Street, Walpole to mouth at inlet Pettee Pond, Walpole/Westwood border.	0.90	Miles	Benthic Macroinvertebrates	
					Fish Bioassessments	
Cobbs Pond	MA73009	Walpole.	14.00	Acres	(Non-Native Aquatic Plants*)	
					Dissolved Oxygen	
					Nutrient/Eutrophication Biological Indicators	
					Transparency / Clarity	
East Branch	MA73-05	East Branch Neponset River - Headwaters, outlet of Forge Pond, Canton through East Branch Pond to mouth at confluence with Neponset River, Canton (locally known as Canton River).	2.60	Miles	(Flow Regime Modification*)	
					Benthic Macroinvertebrates	
					DDT in Fish Tissue	
					Escherichia Coli (E. Coli)	2592
					Fecal Coliform	2592
					PCBs in Fish Tissue	
Forge Pond	MA73020	Canton.	19.00	Acres	Turbidity	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Ganawatte Farm Pond	MA73037	Walpole/Sharon/Foxborough.	29.00	Acres	Aquatic Plants (Macrophytes)	
					Dissolved Oxygen	
					Transparency / Clarity	
Germany Brook	MA73-15	Headwaters, east of Winter Street, Norwood to inlet of Ellis Pond, Norwood.	2.00	Miles	Escherichia Coli (E. Coli)	2592
					Fecal Coliform	2592
					Phosphorus, Total	
Gulliver Creek	MA73-30	From confluence Unquity Brook, Milton to confluence Neponset River, Milton (Note: Unquity Brook culverted, confluence not visible on quad).	0.02	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Fecal Coliform	2592
					PCBs in Fish Tissue	
Hawes Brook	MA73-16	Headwaters, outlet of Ellis Pond, Norwood to mouth at confluence with Neponset River, Norwood.	1.10	Miles	Escherichia Coli (E. Coli)	2592
					Fecal Coliform	2592
					Odor	
Massapoag Brook	MA73-21	Headwaters, outlet Hammer Shop Pond, Sharon to mouth at inlet Forge Pond, Canton (through former 2010 segment: Manns Pond MA73028).	4.20	Miles	(Curly-leaf Pondweed*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Benthic Macroinvertebrates	
Memorial Pond	MA73012	Walpole.	8.00	Acres	Aquatic Plants (Macrophytes)	
					Turbidity	
Mill Brook	MA73-08	From headwaters (perennial portion) north of Hartford Street, Medfield to mouth at inlet of Jewells Pond, Medfield.	2.30	Miles	(Dewatering*)	
					Benthic Macroinvertebrates	
					Dissolved Oxygen	
					Temperature	
Mine Brook	MA73-09	Headwaters, outlet of Jewells Pond, Medfield, to the inlet of Turner Pond, Walpole.	3.00	Miles	Dissolved Oxygen	
Mother Brook	MA73-28	Headwaters at the Charles River Diversion control structure, Dedham to mouth at confluence with Neponset River, Boston [Reported as MA72-13 until May 3, 2000].	3.70	Miles	(Debris*)	
					(Flow Regime Modification*)	
					Color	
					DDT in Fish Tissue	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	2592
					Fecal Coliform	2592
					Mercury in Fish Tissue	
					Odor	
					PCBs in Fish Tissue	
					Phosphorus, Total	
					Trash	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Neponset Reservoir	MA73034	Foxborough.	312.00	Acres	(Fanwort*)	
					Algae	
					Turbidity	
Neponset River	MA73-01	Outlet of Neponset Reservoir, Foxborough to confluence with East Branch, Canton (through former 2010 segments: Crackrock Pond MA73010 and Bird Pond MA73002) (HQW qualifer applies upstream of Crackrock Pond Dam (NATID: MA00816)) (SARIS note: the upper portion of segment between Neponset Reservoir Dam (NATID: MA03115) and Crackrock Pond Dam not included in SARIS descriptor).	13.20	Miles	(Curly-leaf Pondweed*)	
					(Fish Passage Barrier*)	
					(Non-Native Aquatic Plants*)	
					Cadmium	
					DDT in Fish Tissue	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	54840
					Nutrient/Eutrophication Biological Indicators	
					PCBs in Fish Tissue	
					Phosphorus, Total	
Neponset River	MA73-02	Confluence with East Branch, Canton to confluence with Mother Brook, Boston.	7.70	Miles	Unspecified Metals in Sediment	
					(Debris*)	
					(Fish Passage Barrier*)	
					DDT in Fish Tissue	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	2592
					Fecal Coliform	2592
					Flocculant Masses	
					Metals	
					Oil and Grease	
					PCBs in Fish Tissue	
					Scum/Foam	
					Trash	
					Turbidity	
					Unspecified Metals in Sediment	
Neponset River	MA73-03	Confluence with Mother Brook, Boston to Neponset River Baker Chocolate Dam (NATID: MA01093), Milton/Boston.	3.70	Miles	(Curly-leaf Pondweed*)	
					(Debris*)	
					(Fish Passage Barrier*)	
					DDT in Fish Tissue	
					Enterococcus	2592
					Escherichia Coli (E. Coli)	2592
					Fecal Coliform	2592
					Flocculant Masses	
					Metals	
					Oil and Grease	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
					PCBs in Fish Tissue	
					PCBs in Sediment	
					Polychlorinated Biphenyls (PCBs)	
					Scum/Foam	
					Trash	
					Unspecified Metals in Sediment	
Neponset River	MA73-04	Milton Lower Falls Dam (Neponset River Baker Chocolate Dam, NAT ID: MA01093), Milton/Boston to mouth at Dorchester Bay, Boston/Quincy.	0.67	Square Miles	(Debris*)	
					Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Enterococcus	2592
					Fecal Coliform	2592
					PCBs in Fish Tissue	
					Trash	
Pecunit Brook	MA73-25	Headwaters east of Carey Circle and west of Pecunit Street, Canton to mouth at confluence with Neponset River, Canton.	1.80	Miles	Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	54842
Pequid Brook	MA73-22	Headwaters east of York Street, Canton to mouth at inlet of Forge Pond, Canton (excluding the approximately 1.3 miles through Reservoir Pond, segment MA73048).	2.80	Miles	Dissolved Oxygen	
Pine Tree Brook	MA73-29	Headwaters, outlet Hillside Pond, Milton to mouth at confluence with the Neponset River, Milton (through former 2010 segment: Pope's Pond MA73044).	4.60	Miles	(Physical substrate habitat alterations*)	
					Aquatic Plants (Macrophytes)	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	2592
					Fecal Coliform	2592
Plantingfield Brook	MA73-23	Headwaters east of Thatcher Street, Westwood, to mouth at confluence with Purgatory Brook, Norwood (portion culverted).	1.90	Miles	Turbidity	
					(Dewatering*)	
Purgatory Brook	MA73-24	Headwaters east of Farm Lane, Westwood to confluence with Neponset River, Norwood.	5.10	Miles	Escherichia Coli (E. Coli)	
Russell Pond	MA73003	Milton.	9.00	Acres	Escherichia Coli (E. Coli)	2592
					Fecal Coliform	2592
Steep Hill Brook	MA73-18	Headwaters, outlet of Pinewood Pond, Stoughton, to mouth at inlet of Bolivar Pond, Canton.	0.90	Miles	Trash	
					(Curly-leaf Pondweed*)	
					Turbidity	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Turners Pond	MA73059	Milton.	11.00	Acres	Dissolved Oxygen	
					Nutrient/Eutrophication Biological Indicators	
					Turbidity	
Unnamed Tributary	MA73-32	From the outlet of Town Pond, Stoughton to mouth at confluence with Steep Hill Brook, Stoughton.	1.00	Miles	Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	54860
Unnamed Tributary	MA73-33	Locally known as "Meadow Brook" - From where the underground/culverted stream emerges east of Pleasant Street, Norwood to confluence with Neponset River, Norwood.	0.70	Miles	Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	54861
					Phosphorus, Total	
Unnamed Tributary	MA73-34	Headwaters, outlet Clark Pond, Walpole to confluence with Neponset River, Walpole (locally considered part of Spring Brook) (excluding the approximately 0.2 miles through Diamond Pond and the approximately 0.2 miles through Memorial Pond segment MA73012).	0.80	Miles	(Debris*)	
					Benthic Macroinvertebrates	
					Trash	
Unquity Brook	MA73-26	Isolated (urban): Headwaters (perennial portion) near Randolph Avenue, Milton to mouth at confluence with Gulliver Creek, Milton (Note: culverted portions of segment total approximately 1/3 of segment length, or 0.5 miles).	1.60	Miles	(Dewatering*)	
					(Physical substrate habitat alterations*)	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	2592
					Fecal Coliform	2592
					Fish Bioassessments	
					Phosphorus, Total	
					Sedimentation/Siltation	
Boston Harbor: Weymouth & Weir						
Accord Brook	MA74-16	Headwaters, outlet Accord Pond, Hingham to water supply intake (4131000-02S Accord Brook) south of South Pleasant Street, Hingham.	3.20	Miles	Benthic Macroinvertebrates	
					Dissolved Oxygen	
Accord Brook	MA74-17	From water supply intake (4131000-02S Accord Brook) south of South Pleasant Street, Hingham to mouth at inlet Triphammer Pond, Hingham.	1.80	Miles	(Dewatering*)	
					Benthic Macroinvertebrates	
Cochato River	MA74-06	Outlet Lake Holbrook, Holbrook to confluence with Farm River forming headwaters Monatiquot River, Braintree (through former 2010 segment: Ice House Pond MA74028).	4.10	Miles	Chlordane in Fish Tissue	
					Chlordane in Sediment	
					Copper	
					DDT in Fish Tissue	
					DDT in Sediment	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	R1_MA_2019_01
					Fecal Coliform	R1_MA_2019_01



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
					Lead	
Cranberry Brook	MA74-22	Headwaters, outlet Cranberry Pond, Braintree to mouth at confluence with Cochato River, Braintree (Cranberry Brook Watershed ACEC).	1.90	Miles	Escherichia Coli (E. Coli)	
Crooked Meadow River	MA74-01	Headwaters, outlet Cushing Pond, Hingham to confluence with Fulling Mill Brook (forming headwater of Weir River), Hingham.	1.00	Miles	Nutrient/Eutrophication Biological Indicators	
Farm River	MA74-27	From Randolph/Braintree border (where name changes from Blue Hill River), to the Braintree Water and Sewer Department public water supply Farm River intake, north of Richardi Reservoir, Braintree (formerly part of 2016 segment: Farm River MA74-07).	2.60	Miles	(Fish Passage Barrier*) Escherichia Coli (E. Coli)	
Farm River	MA74-28	From the Braintree Water and Sewer Department public water supply Farm River intake, north of Richardi Reservoir, Braintree to confluence with Cochato River (forming headwaters of Monatiquot River), Braintree (formerly part of 2016 segment: Farm River MA74-07).	0.50	Miles	(Fish Passage Barrier*) Escherichia Coli (E. Coli)	
Furnace Brook	MA74-10	From headwaters north of Blue Hills Reservoir, Quincy to confluence with Blacks Creek, Quincy (portions culverted underground).	4.20	Miles	Benthic Macroinvertebrates Dissolved Oxygen Escherichia Coli (E. Coli)	
Hingham Harbor	MA74-18	Hingham Harbor inside a line from Crows Point to Worlds End, Hingham (formerly reported as 2008 segment: Hingham Harbor MA70-08).	1.12	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish] Escherichia Coli (E. Coli) Fecal Coliform PCBs in Fish Tissue	 R1_MA_2019_01 R1_MA_2019_01
Lake Holbrook	MA74013	Holbrook.	31.00	Acres	Nutrient/Eutrophication Biological Indicators	
Mary Lee Brook	MA74-23	Headwaters, north of West High Street, Avon to mouth at confluence with Cochato River, Randolph.	2.70	Miles	Escherichia Coli (E. Coli)	
Monatiquot River	MA74-08	Headwaters at confluence of Cochato and Farm rivers, Braintree to confluence with Weymouth Fore River at Commercial Street, Braintree.	4.40	Miles	(Curly-leaf Pondweed*) (Fish Passage Barrier*) (Physical substrate habitat alterations*) Benthic Macroinvertebrates Dissolved Oxygen Escherichia Coli (E. Coli) Fecal Coliform	 R1_MA_2019_01 R1_MA_2019_01



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Plymouth River	MA74-20	Headwaters, perennial portion (including channelized, culverted section) north of Route 3 (Pilgrim Highway), Weymouth to the mouth at inlet of Cushing Pond, Hingham (entire river not depicted on Weymouth USGS quad).	3.60	Miles	Escherichia Coli (E. Coli)	
Sylvan Lake	MA74021	Holbrook.	6.00	Acres	Chlordane in Fish Tissue	
					DDT in Fish Tissue	
Town Brook	MA74-09	Headwaters, outlet Old Quincy Reservoir, Braintree to confluence with Town River Bay north of Route 3A, Quincy (SARIS note: includes "The Canal"/Town River) (portions culverted underground).	3.50	Miles	(Flow Regime Modification*)	
					(Physical substrate habitat alterations*)	
					Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	R1_MA_2019_01
					Fecal Coliform	R1_MA_2019_01
Town River Bay	MA74-15	From the headwaters at the Route 3A bridge, Quincy to the mouth at Weymouth Fore River between Shipyard and Germantown Points, Quincy.	0.46	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Dissolved Oxygen	
					Enterococcus	R1_MA_2019_01
					Fecal Coliform	R1_MA_2019_01
					PCBs in Fish Tissue	
Unnamed Tributary	MA74-19	Unnamed Tributary to Plymouth River, headwaters, west of Route 53 (Whiting Street), Hingham to mouth at confluence with Plymouth River, Hingham.	1.10	Miles	Temperature	
Weir River	MA74-02	Headwaters at confluence of Crooked Meadow River and Fulling Mill Brook, Hingham to Foundry Pond outlet, Hingham (through former 2008 segment: Foundry Pond MA74011) (area associated with Weir River ACEC designated as ORW).	2.70	Miles	(Curly-leaf Pondweed*)	
					(Dewatering*)	
					(Fish Passage Barrier*)	
					Escherichia Coli (E. Coli)	R1_MA_2019_01
					Fecal Coliform	R1_MA_2019_01
					Nutrient/Eutrophication Biological Indicators	
					Sedimentation/Siltation	
Weir River	MA74-11	From Foundry Pond outlet, Hingham to mouth at Worlds End, Hingham and Nantasket Road near Beech Avenue, Hull (including unnamed tributary from outlet Straits Pond, Hingham/Hull) (area associated with Weir River ACEC designated as ORW).	0.83	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Fecal Coliform	R1_MA_2019_01
					PCBs in Fish Tissue	
Weymouth Back River	MA74-05	Headwaters, outlet Elias Pond, Weymouth to the base of the fish ladder north of Commercial Street, Weymouth (area associated with Weymouth Back River ACEC designated as ORW).	0.70	Miles	Dissolved Oxygen	
					Escherichia Coli (E. Coli)	R1_MA_2019_01
					Fecal Coliform	R1_MA_2019_01



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Weymouth Back River	MA74-13	From the base of the fish ladder north of Commercial Street, Weymouth to mouth between Lower Neck, Weymouth (to the west) and Wompatuck Road, Hingham (area associated with Weymouth Back River ACEC designated as ORW).	0.85	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Fecal Coliform	R1_MA_2019_01
					PCBs in Fish Tissue	
Weymouth Fore River	MA74-14	Commercial Street, Braintree to mouth (eastern point at Lower Neck, Weymouth and western point at Wall Street on Houghs Neck, Quincy).	2.29	Square Miles	Cause Unknown [Contaminants in Fish and/or Shellfish]	
					Enterococcus	R1_MA_2019_01
					Fecal Coliform	R1_MA_2019_01
					PCBs in Fish Tissue	
Whitmans Pond	MA74025	Weymouth.	176.00	Acres	(Curly-leaf Pondweed*)	
					(Fanwort*)	
					DDT in Fish Tissue	
Buzzards Bay						
"Inner" Sippican Harbor	MA95-70	The waters landward of a line from Allen Point, Marion around the southeastern tip of Ram Island, then westerly from the southern tip of Ram Island to the point of land south of Nyes Wharf, Marion excluding Hammett Cove (formerly reported as a portion of segment MA95-08).	0.57	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	
Acushnet River	MA95-31	Headwaters, outlet New Bedford Reservoir, Acushnet to Hamlin Street culvert, Acushnet.	2.90	Miles	Dissolved Oxygen	
					Enterococcus	36170
					Escherichia Coli (E. Coli)	36170
					Fecal Coliform	36170
					Nutrients	
Acushnet River	MA95-32	Hamlin Street culvert, Acushnet to culvert at Main Street, Acushnet.	1.10	Miles	Benthic Macroinvertebrates	
					Dissolved Oxygen	
					Enterococcus	36170
					Escherichia Coli (E. Coli)	36170
					Fecal Coliform	36170
					Nutrients	
Acushnet River	MA95-33	Outlet Main Street culvert, Acushnet to Coggeshall Street/Howland Road bridge, New Bedford/Fairhaven.	0.31	Square Miles	(Debris*)	
					Color	
					Dissolved Oxygen	
					Enterococcus	36171
					Fecal Coliform	36171
					Metals	
					Nitrogen, Total	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
					Nutrient/Eutrophication Biological Indicators	
					Odor	
					Oil and Grease	
					Polychlorinated Biphenyls (PCBs)	
					Trash	
Agawam River	MA95-29	Wareham WWTP outfall, Wareham to confluence with Wankinco River (forming headwaters of the Wareham River) just north of the Route 6 bridge, Wareham.	0.16	Square Miles	Algae	
					Fecal Coliform	36171
					Nitrogen, Total	
Angeline Brook	MA95-83	Perennial portion south of Charlotte White Road, Westport to mouth at West Branch Westport River (Angeline Cove), Westport.	4.40	Miles	Enterococcus	
Apponagansett Bay	MA95-39	From the mouth of Buttonwood Brook, Dartmouth to a line drawn from Ricketsons Point, Dartmouth to Samoset Street near North Avenue, Dartmouth.	1.06	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	
					PCBs in Fish Tissue	
Aucoot Cove	MA95-71	From the confluence with Aucoot Creek, Marion to the boundary of Division of Marine Fisheries designated shellfishing growing area BB31.1, north and southwest from Haskell Island, Marion (formerly part of 2006 segment: Aucoot Cove MA95-09).	0.03	Square Miles	Dissolved Oxygen	
					Fecal Coliform	36172
					Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	
Aucoot Creek	MA95-72	Estuarine portion east of Holly Pond Road, Marion to confluence with Aucoot Cove, Marion (formerly part of 2006 segment: Aucoot Cove MA95-09).	0.02	Square Miles	Dissolved Oxygen	
					Fecal Coliform	36172
					Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	
Beaverdam Creek	MA95-53	Estuarine portion just south of the outlet from cranberry bog southeast of Route 6, Wareham to confluence with Wewantic River, Wareham.	0.04	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen, Total	
Butler Cove	MA95-77	just south of Buttermilk Bay, Wareham.	0.05	Square Miles	Estuarine Bioassessments	
Buttermilk Bay	MA95-01	Bourne/Wareham.	0.67	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nutrient/Eutrophication Biological Indicators	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Buzzards Bay	MA95-62	Open water area encompassed within a line drawn from Wilber Point, Fairhaven to Clarks Point, New Bedford to Ricketson Point, Dartmouth to vicinity of Samoset Street, Dartmouth down to Round Hill Point, Dartmouth and back to Wilber Point, Fairhaven.	8.07	Square Miles	Fecal Coliform	36172
					PCBs in Fish Tissue	
Clarks Cove	MA95-38	The semi-enclosed waterbody landward of a line drawn between Clarks Point, New Bedford and Ricketsons Point, Dartmouth.	1.90	Square Miles	Enterococcus	36172
					Fecal Coliform	36172
					PCBs in Fish Tissue	
Copicut Reservoir	MA95175	Dartmouth/Fall River.	596.00	Acres	Mercury in Fish Tissue	
Copicut River	MA95-43	Headwaters, outlet of Copicut Reservoir, Fall River to mouth at inlet of Cornell Pond, Dartmouth.	1.30	Miles	Mercury in Fish Tissue	
					PCBs in Fish Tissue	
Cornell Pond	MA95031	Dartmouth.	12.00	Acres	Mercury in Fish Tissue	33880
					PCBs in Fish Tissue	
Crane Brook Bog Pond	MA95033	Carver.	37.00	Acres	(Non-Native Aquatic Plants*)	
					Algae	
					Phosphorus, Total	
Dunham Pond	MA95044	Carver.	43.00	Acres	Chlorophyll-a	
					Transparency / Clarity	
East Branch Westport River	MA95-41	Old County Road bridge, Westport to the mouth at Westport Harbor/Westport River, Westport (excluding Horseneck Channel).	2.65	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36171
					Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	
Eel Pond	MA95-61	Coastal pond at the head of Mattapoisset Harbor, Mattapoisset.	0.04	Square Miles	Fecal Coliform	36172
					Nutrient/Eutrophication Biological Indicators	
Fiddlers Cove	MA95-79	cove south off Megansett Harbor, Falmouth.	0.01	Square Miles	Dissolved Oxygen	
					Estuarine Bioassessments	
					Fecal Coliform	
					Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	
Halfway Pond	MA95178	Plymouth (formerly reported as 1996 segment: Halfway Pond MA94057).	215.00	Acres	Harmful Algal Blooms	
Hammett Cove	MA95-56	Borders Sippican Harbor (along a line from the southwestern most point of Little Neck to the end of the seawall on the opposite point), Marion.	0.07	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen, Total	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Herring Brook	MA95-21	Estuarine portion northeast of Dale Drive and west of Route 28A, Falmouth to the mouth at Buzzards Bay, Falmouth.	0.01	Square Miles	Chlorophyll-a	
					Fecal Coliform	36172
					Nitrogen, Total	
Kirby Brook	MA95-82	Headwaters just south of Old County Road, Westport to the mouth at East Branch Westport River, Westport.	2.00	Miles	Enterococcus	
Leonards Pond	MA95080	Rochester.	49.00	Acres	(Aquatic Plants (Macrophytes)*)	
					(Non-Native Aquatic Plants*)	
					Chlorophyll-a	
					Transparency / Clarity	
Little Buttermilk Bay	MA95-76	off of Buttermilk Bay, Bourne.	0.16	Square Miles	Estuarine Bioassessments	
					Nutrient/Eutrophication Biological Indicators	
Mattapoissett Harbor	MA95-35	From the mouth of the Mattapoissett River, Mattapoissett to a line drawn from Ned Point to a point of land between Bayview Avenue and Grandview Avenue, Mattapoissett.	1.12	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nutrient/Eutrophication Biological Indicators	
Mattapoissett River	MA95-36	Headwaters, outlet Snipatuit Pond, Rochester to Mattapoissett River Dam (#MA02447) at Fairhaven Road (Route 6), Mattapoissett.	10.40	Miles	Enterococcus	
					Escherichia Coli (E. Coli)	
Megansett Harbor	MA95-19	From the outlet of Squeteague Harbor, Falmouth to Buzzards Bay at a line from the western tip of Scraggy Neck, Bourne south to the tip of Nyes Neck, Falmouth.	1.44	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	
Nasketucket River	MA95-67	Estuarine portion, from the boundary of the salt water wetland south of Route 6, Fairhaven to the mouth at Little Bay, Fairhaven (includes connector to Little Bay on the east side of the river).	0.03	Square Miles	Nitrogen, Total	
New Bedford Inner Harbor	MA95-42	Coggeshall Street/Howland Road bridge, New Bedford/Fairhaven to hurricane barrier, Fairhaven/New Bedford.	1.25	Square Miles	(Debris*)	
					Dissolved Oxygen	
					Enterococcus	36171
					Fecal Coliform	36171
					Metals	
					Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	
					Odor	
					Oil and Grease	
					PCBs in Fish Tissue	
					Polychlorinated Biphenyls (PCBs)	
					Trash	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
New Bedford Reservoir	MA95110	Acushnet.	210.00	Acres	(Aquatic Plants (Macrophytes)*)	
					(Non-Native Aquatic Plants*)	
					DDT in Fish Tissue	
					Dissolved Oxygen	
					Mercury in Fish Tissue	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
Noquochoke Lake	MA95113	(Main Basin) Dartmouth.	88.00	Acres	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Enterococcus	
					Mercury in Fish Tissue	33880
					PCBs in Fish Tissue	
					Turbidity	
Noquochoke Lake	MA95170	(South Basin) Dartmouth.	13.00	Acres	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Mercury in Fish Tissue	33880
					PCBs in Fish Tissue	
					Turbidity	
Noquochoke Lake	MA95171	(North Basin) Dartmouth.	17.00	Acres	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Mercury in Fish Tissue	33880
					PCBs in Fish Tissue	
					Turbidity	
Onset Bay	MA95-02	Wareham.	0.78	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36172
Outer New Bedford Harbor	MA95-63	From the hurricane barrier, Fairhaven/New Bedford to a line drawn from Wilbur Point, Fairhaven to Clarks Point, New Bedford (formerly part of 2000 segment: Outer New Bedford Harbor MA95-27).	5.78	Square Miles	Dissolved Oxygen	
					Enterococcus	36172
					Fecal Coliform	36172
					Metals	
					Nitrogen, Total	
					Other Organics	
					PCBs in Fish Tissue	
Parker Mills Pond	MA95115	Wareham.	73.00	Acres	(Non-Native Aquatic Plants*)	
					Phosphorus, Total	
Paskamanset River	MA95-11	Headwaters, outlet Turners Pond, Dartmouth/New Bedford to confluence with Slocums River (Rock O'Dundee Road), Dartmouth.	10.50	Miles	Combined Biota/Habitat Bioassessments	
					Enterococcus	
					Escherichia Coli (E. Coli)	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Pocasset Harbor	MA95-17	From the confluence with Red Brook Harbor near the northern portion of Bassett's Island and Patuisset, Bourne to the mouth at Buzzards Bay between the western portion of Bassett's Island and Wings Neck, Bourne.	0.33	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36172
Queen Sewell Pond	MA95180	Bourne (formerly reported as 2000 segment: Queen Sewell Pond MA96253).	18.00	Acres	Harmful Algal Blooms	
Quissett Harbor	MA95-25	The semi-enclosed body of water landward of a line drawn between The Knob and Gansett Point, Falmouth.	0.17	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	
Rands Harbor	MA95-78	harbor south off Megansett Harbor, Falmouth.	0.02	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	
					Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	
Red Brook Harbor	MA95-18	From the confluence with Pocasset Harbor between the northern portion of Bassett's Island and Patuisset, Bourne to the mouth at Buzzards Bay between the southern portion of Bassett's Island and Scraggy Neck, Bourne (including Hen Cove).	0.92	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nutrient/Eutrophication Biological Indicators	
Sampson Pond	MA95125	Carver.	295.00	Acres	(Non-Native Aquatic Plants*)	
					(Non-Native Fish/Shellfish/Zooplankton*)	
					DDT in Fish Tissue	
					Mercury in Fish Tissue	
Shingle Island River	MA95-12	Outlet of small unnamed pond northeast of Flag Swamp Road, Dartmouth to mouth at inlet Noquochoke Lake (north basin), Dartmouth.	5.00	Miles	Enterococcus	
Sippican River	MA95-06	Headwaters, outlet Leonards Pond, Rochester to County Road, Marion/Wareham.	3.00	Miles	Chlorophyll-a	
					Dissolved Oxygen	
					Enterococcus	
Slocums River	MA95-34	Rock O'Dundee Road (confluence with Paskemanset River), Dartmouth to mouth at Buzzards Bay, Dartmouth.	0.66	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	
Squeteague Harbor	MA95-55	Waters landward of the confluence with Megansett Harbor, Bourne/Falmouth.	0.15	Square Miles	Nutrient/Eutrophication Biological Indicators	
Tihonet Pond	MA95146	Wareham.	87.00	Acres	Dissolved Oxygen	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Wareham River	MA95-03	From confluence of Wankinko and Agawam Rivers at Route 6 bridge, Wareham to Buzzards Bay (at an imaginary line from Cromeset Point to curved point east/southeast of Long Beach Point), Wareham. Including Marks Cove, Wareham.	1.18	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen, Total	
West Branch Westport River	MA95-37	West of Quail Trail, Westport to mouth at Westport Harbor/Westport River, Westport.	1.29	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	
Weweantic River	MA95-04	Headwaters confluence of Rocky Meadow and South Meadow brooks, Carver to the inlet of Horseshoe Pond, Wareham (through former 2014 segment: Tremont Mill Pond MA95150).	11.50	Miles	(Non-Native Aquatic Plants*)	
					Enterococcus	
Weweantic River	MA95-05	Outlet Horseshoe Pond, Wareham to mouth at Buzzards Bay, Marion/Wareham.	0.62	Square Miles	Enterococcus	36172
					Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen, Total	
Wild Harbor	MA95-20	Waters landward of an imaginary line from Crow Point to Nyes Neck (excluding Wild Harbor River), Falmouth.	0.13	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	
Wild Harbor River	MA95-68	Headwaters, Falmouth to mouth at Wild Harbor, Falmouth.	0.03	Square Miles	Fecal Coliform	36172
					Nutrient/Eutrophication Biological Indicators	
Cape Cod						
Allens Harbor	MA96-95	south of Lower County Road, Harwich to Doanes Creek, Harwich.	0.02	Square Miles	Fecal Coliform	
					Nitrogen, Total	65883
					Nutrient/Eutrophication Biological Indicators	65883
Areys Pond	MA96-70	Orleans.	0.02	Square Miles	Nitrogen, Total	33786
					Nutrient/Eutrophication Biological Indicators	
Ashumet Pond	MA96004	Mashpee/Falmouth.	203.00	Acres	Abnormal Fish Deformities, Erosions, Lesions, Tumors (DELTS)	
					Dissolved Oxygen	
					Mercury in Fish Tissue	33880
					Phosphorus, Total	
Bassing Harbor	MA96-48	Excluding Crows Pond and Ryder Cove, Chatham.	0.13	Square Miles	Estuarine Bioassessments	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Boat Meadow River	MA96-15	Headwaters east of old railway grade, Eastham to mouth at inlet Cape Cod Bay, Eastham.	0.05	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36772
Cedar Pond	MA96-88	Orleans (in Inner Cape Cod Bay ACEC).	0.03	Square Miles	(Fish Passage Barrier*)	
					Chlorophyll-a	
					Dissolved Oxygen	
					Dissolved Oxygen Supersaturation	
Centerville Harbor	MA96-03	From an imaginary line that extends from Dowses Beach, Barnstable to Hyannis Point, Barnstable including all waters north to the shore, Barnstable.	1.46	Square Miles	Estuarine Bioassessments	
Chase Garden Creek	MA96-103	Headwaters south of Roads End and west of Jericho Road, Dennis to New Boston Road, Dennis.	1.20	Miles	(Curly-leaf Pondweed*)	
					Escherichia Coli (E. Coli)	
Childs River	MA96-98	Headwaters outlet Johns Pond, Mashpee to confluence with tidal portion south of Barrows Road, Falmouth.	2.40	Miles	(Curly-leaf Pondweed*)	
					(Fish Passage Barrier*)	
					Lead	
Cliff Pond	MA96039	Brewster.	190.00	Acres	Harmful Algal Blooms	
Crystal Lake	MA96050	Orleans.	33.00	Acres	Dissolved Oxygen	
Duck Creek	MA96-32	Source west of Route 6, Wellfleet to mouth at inlet Wellfleet Harbor (at a line from Shirttail Point to Taylor Road), Wellfleet.	0.15	Square Miles	Benthic Macroinvertebrates	
					Dissolved Oxygen	
					Fecal Coliform	36772
					Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	
Flax Pond	MA96091	Brewster.	47.00	Acres	Dissolved Oxygen	
Great Harbor	MA96-18	The waters north of an imaginary line drawn east from Penzance Point, Falmouth to Devils Foot Island, Falmouth and southeast from Devils Foot Island to Juniper Point (excludes Eel Pond), Falmouth.	0.31	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36772
Great Pond	MA96115	Eastham.	109.00	Acres	Chlorophyll-a	
					Dissolved Oxygen	
					Phosphorus, Total	
Hamblin Pond	MA96126	Barnstable.	114.00	Acres	Dissolved Oxygen	
					Harmful Algal Blooms	
					Mercury in Fish Tissue	33880
Hawes Run	MA96-101	Headwaters outlet small unnamed pond west of Higgins Crowell Road, Yarmouth to mouth at inlet Mill Pond, Yarmouth.	1.70	Miles	(Debris*)	
					Trash	
Herring River	MA96-33		0.40		(Fish Passage Barrier*)	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
		South of High Toss Road, Wellfleet to mouth at inlet Wellfleet Harbor (at an imaginary line drawn due north from the eastern tip of Great Island to the opposite shore), Wellfleet.		Square Miles	(Flow Regime Modification*)	
					Aluminum	
					Estuarine Bioassessments	
					Fecal Coliform	36772
					pH, Low	
Herring River	MA96-67	Headwaters outlet Herring Pond, Wellfleet to south of High Toss Road, Wellfleet.	3.60	Miles	(Fish Kill(s)*)	
					(Fish Passage Barrier*)	
					(Flow Regime Modification*)	
					Aluminum	
					pH, Low	
Hyannis Harbor	MA96-05	The waters from the shoreline to an imaginary line drawn from the light at the end of Hyannis breakwater, Barnstable to the point west of Dunbar Point, Barnstable.	0.68	Square Miles	Estuarine Bioassessments	
Lewis Bay	MA96-36	Includes portion of Pine Island Creek and Uncle Roberts Cove, Yarmouth to confluence with Nantucket Sound, Barnstable/Yarmouth (excluding Hyannis Inner Harbor, Barnstable/Yarmouth and Mill Creek, Yarmouth).	1.79	Square Miles	Estuarine Bioassessments	64146
					Estuarine Bioassessments	64147
					Fecal Coliform	36771
					Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	
Little River	MA96-99	Headwaters outlet Lovells Pond, Barnstable to confluence with tidal portion south of Old Post Road, Barnstable.	1.80	Miles	(Fish Passage Barrier*)	
					Escherichia Coli (E. Coli)	
Loagy Bay	MA96-125	Wellfleet.	0.20	Square Miles	Chlorophyll-a	
					Dissolved Oxygen	
Long Pond	MA96183	Brewster/Harwich.	715.00	Acres	Dissolved Oxygen	
Lovells Pond	MA96185	Barnstable.	54.00	Acres	(Fish Passage Barrier*)	
					Chlorophyll-a	
					Dissolved Oxygen	
					Harmful Algal Blooms	
					Phosphorus, Total	
					Transparency / Clarity	
					Turbidity	
Lovers Lake	MA96186	Chatham.	37.00	Acres	Transparency / Clarity	
Lower Mill Pond	MA96188	Brewster.	44.00	Acres	Algae	
					Chlorophyll-a	
					Phosphorus, Total	
					Turbidity	
Maraspin Creek	MA96-06		0.03		Fecal Coliform	36771



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
		From Commerce Road, Barnstable to mouth at inlet Barnstable Harbor at Blish Point, Barnstable.		Square Miles	Nutrient/Eutrophication Biological Indicators	
Mashpee Pond	MA96194	Mashpee/Sandwich.	377.00	Acres	Dissolved Oxygen	
					Mercury in Fish Tissue	33880
Middle Pond	MA96198	Barnstable.	104.00	Acres	(Curly-leaf Pondweed*)	
					Dissolved Oxygen	
					Harmful Algal Blooms	
Moll Pond	MA96355	Eastham.	3.00	Acres	Harmful Algal Blooms	
Mystic Lake	MA96218	Barnstable.	146.00	Acres	(Non-Native Aquatic Plants*)	
					Dissolved Oxygen	
Nauset Harbor	MA96-28	The waters south of an imaginary line drawn east from Woods Cove, Orleans around the southern point of Stony Island, around the southern end of the unnamed island in the harbor, to Cape Cod National Seashore (CCNS), excluding Mill Pond, Orleans (area within CCNS designated as ORW).	0.41	Square Miles	Estuarine Bioassessments	
Pleasant Bay	MA96-77	The waters between the mouth of Muddy Creek, Harwich and imaginary lines drawn from the northeastern edge of Orleans (near The Horseshoe and The Narrows), southeasterly around the northeastern tip of Sipson Island, and Sipson Meadow, Orleans then south to the northern tip of Strong Island, Chatham and from the southeastern tip of Strong Island to Allen Point, Chatham (excluding the delineated segments; Bassing Harbor, Round Cove and Quanset Pond).	2.88	Square Miles	Estuarine Bioassessments	
					Nitrogen, Total	33799
Popponesset Creek	MA96-39	All waters west of Popponesset Island (from Popponesset Island Road bridge at the north to a line extended from the southeastern most point of the island southerly to Popponesset Beach), Mashpee.	0.05	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36772
Quashnet River	MA96-90	Headwaters, outlet Johns Pond, Mashpee to just south of Route 28, Falmouth (area within Waquoit Bay ACEC designated as ORW).	4.10	Miles	(Curly-leaf Pondweed*)	
					Temperature	
Quivett Creek	MA96-09	Outlet of unnamed pond just south of Route 6A, Brewster/Dennis to mouth at inlet Cape Cod Bay, Brewster/Dennis.	0.04	Square Miles	(Curly-leaf Pondweed*)	
					Dissolved Oxygen	
					Fecal Coliform	36771
Red Lily Pond	MA96257	Barnstable.	4.00	Acres	(Aquatic Plants (Macrophytes)*)	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
					Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	
Red River	MA96-107	Headwaters west of Mayflower Drive, Chatham to south Chatham Road, Chatham.	0.90	Miles	Escherichia Coli (E. Coli)	
Round Cove	MA96-75	east of Route 28, Harwich outlet to Pleasant Bay, Harwich.	0.02	Square Miles	Fecal Coliform	
					Nitrogen, Total	33796
Ryder Pond	MA96268	Truro.	18.00	Acres	Dissolved Oxygen	
					Mercury in Fish Tissue	33880
					Phosphorus, Total	
Santuit Pond	MA96277	Mashpee.	164.00	Acres	(Fish Passage Barrier*)	
					Abnormal Fish Deformities, Erosions, Lesions, Tumors (DELTS)	
					Chlorophyll-a	
					Harmful Algal Blooms	
					Nutrient/Eutrophication Biological Indicators	
					pH, High	
					Phosphorus, Total	
					Transparency / Clarity	
Santuit River	MA96-91	Headwaters, outlet Santuit Pond, Mashpee to confluence with tidal portion south of Old Mill Road/Old Kings Road, Mashpee/Barnstable.	1.60	Miles	(Fish Passage Barrier*)	
					Temperature	
Shawme Lake Lower	MA96288	Sandwich.	25.00	Acres	Nutrient/Eutrophication Biological Indicators	
Spectacle Pond	MA96307	Sandwich.	93.00	Acres	Dissolved Oxygen	
					Mercury in Fish Tissue	42406
Stage Harbor	MA96-11	From outlet Mill Pond, Chatham (includes Mitchell River SARIS# 9661975) to inlet of Nantucket Sound at a line from the southernmost point of Harding Beach southeast to Harding Beach Point, Chatham.	0.56	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	36772
Stillwater Pond	MA96309	Chatham.	18.00	Acres	(Fish Passage Barrier*)	
					Transparency / Clarity	
Town Cove	MA96-68	Entire cove, Orleans/Eastham (including Rachael Cove and Woods Cove, Orleans) outlet to Nauset Harbor, Orleans (area within Cape Cod National Seashore designated as ORW).	0.79	Square Miles	Estuarine Bioassessments	
Uncle Harvey Pond	MA96319	Orleans.	6.00	Acres	Harmful Algal Blooms	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Unnamed Tributary	MA96-100	Unnamed tributary to Halls Creek, Barnstable from headwaters south of the intersection of Old Craigville and Old Town roads, Barnstable to confluence with tidal portion just south of Craigville Beach Road, Barnstable.	0.50	Miles	Escherichia Coli (E. Coli)	
Unnamed Tributary	MA96-104	Unnamed tributary to Freemans Pond, Brewster from outlet of channelized wetland south of Lower Road, Brewster to mouth at inlet Freemans Pond, Brewster.	0.60	Miles	Escherichia Coli (E. Coli)	
Unnamed Tributary	MA96-108	Unnamed tributary to Herring River, headwaters outlet Perch Pond, Wellfleet to mouth at confluence with Herring River, Wellfleet (area within Cape Cod National Seashore designated as ORW).	2.00	Miles	Escherichia Coli (E. Coli)	
Upper Shawme Lake	MA96326	Sandwich.	21.00	Acres	Nutrient/Eutrophication Biological Indicators	
Walkers Pond	MA96331	Brewster.	100.00	Acres	Algae	
					Chlorophyll-a	
					Harmful Algal Blooms	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
					Transparency / Clarity	
					Turbidity	
Wellfleet Harbor	MA96-34	The waters north of an imaginary line drawn east from the southern tip of Jeremy Point, Wellfleet to Sunken Meadow, Eastham excluding the estuaries of Herring River, Duck Creek, Blackfish Creek, and Fresh Brook, Wellfleet (area within Cape Cod National Seashore designated as ORW).	9.16	Square Miles	Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	
Whites Brook	MA96-102	Headwaters in channelized wetland south of Route 6A, Yarmouth to confluence with tidal portion north of Route 6A, Yarmouth.	0.30	Miles	Escherichia Coli (E. Coli)	
Wychmere Harbor	MA96-96	south of Route 28, Harwich outlet to Nantucket Sound, Harwich.	0.02	Square Miles	Fecal Coliform	
					Nitrogen, Total	65882
					Nutrient/Eutrophication Biological Indicators	65882
Charles						
Alder Brook	MA72-22	Headwaters, perennial portion northwest of the Route 135 and South Street intersection, Needham to mouth at confluence with the Charles River. Needham.	0.30	Miles	Benthic Macroinvertebrates	
					Nutrient/Eutrophication Biological Indicators	40317



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Beaver Brook	MA72-12	Headwaters, outlet Beaver Pond, Bellingham to mouth at confluence with the Charles River, Bellingham.	1.40	Miles	Escherichia Coli (E. Coli)	
Beaver Brook	MA72-28	Headwaters, perennial portion north of Route 2, Lexington to mouth at confluence with the Charles River, Waltham (one culverted portion approximately 2900 feet (0.55mile)).	5.50	Miles	(Flow Regime Modification*)	
					(Other anthropogenic substrate alterations*)	
					(Water Chestnut*)	
					Algae	40317
					Chloride	
					Dissolved Oxygen	40317
					Escherichia Coli (E. Coli)	32379
					Organic Enrichment (Sewage) Biological Indicators	40317
					Phosphorus, Total	40317
					Sedimentation/Siltation	
Bulloughs Pond	MA72011	Newton.	7.00	Acres	Algae	
					Nutrient/Eutrophication Biological Indicators	
Cambridge Reservoir	MA72014	Waltham/Lincoln/Lexington.	531.00	Acres	Chloride	
Cambridge Reservoir, Upper Basin	MA72156	Lincoln/Lexington.	44.00	Acres	Aquatic Plants (Macrophytes)	
					Chloride	
					Turbidity	
Chandler Pond	MA72017	Boston.	11.00	Acres	Algae	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
					Transparency / Clarity	
Charles River	MA72-03	From Milford WWTF discharge (NPDES: MA0100579), Hopedale to outlet Box Pond, Bellingham (through former 2006 segment: Box Pond MA72008).	3.40	Miles	Algae	40317
					DDT in Fish Tissue	
					Dissolved Oxygen Supersaturation	40317
					Escherichia Coli (E. Coli)	32365
					Organic Enrichment (Sewage) Biological Indicators	40317
					Phosphorus, Total	40317
Charles River	MA72-04	From outlet Box Pond, Bellingham to inlet Populatic Pond, Norfolk/Medway (one culverted portion approximately 350 feet (0.07mile)).	11.50	Miles	(Flow Regime Modification*)	
					Ambient Bioassays - Chronic Aquatic Toxicity	
					Chlordane in Fish Tissue	
					DDT in Fish Tissue	
					Escherichia Coli (E. Coli)	32366



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
					Fish Bioassessments	
					Mercury in Fish Tissue	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
					Temperature	
Charles River	MA72-05	From outlet Populatic Pond, Norfolk/Medway to South Natick Dam (NATID: MA00341), Natick.	18.10	Miles	(Fanwort*)	
					(Water Chestnut*)	
					Algae	40317
					Benthic Macroinvertebrates	
					Chlordane in Fish Tissue	
					DDT in Fish Tissue	
					Dissolved Oxygen	40317
					Dissolved Oxygen Supersaturation	40317
					Mercury in Fish Tissue	
					Nutrient/Eutrophication Biological Indicators	40317
					Phosphorus, Total	40317
					Turbidity	40317
Charles River	MA72-06	From South Natick Dam (NATID: MA00341), Natick to Chestnut Street, Needham/Dover.	8.20	Miles	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Flow Regime Modification*)	
					(Non-Native Aquatic Plants*)	
					(Water Chestnut*)	
					Algae	40317
					Cause Unknown [Fish Population Imbalance]	
					DDT in Fish Tissue	
					Fish Bioassessments	
					Nutrient/Eutrophication Biological Indicators	40317
					PCBs in Fish Tissue	
					Phosphorus, Total	40317
Charles River	MA72-07	From Chestnut Street, Needham/Dover to Watertown Dam (NATID: MA00456), Watertown.	24.00	Miles	(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fish Passage Barrier*)	
					(Flow Regime Modification*)	
					(Water Chestnut*)	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
					Benthic Macroinvertebrates	
					DDT in Fish Tissue	
					Escherichia Coli (E. Coli)	32370
					Fish Bioassessments	
					Harmful Algal Blooms	40317
					Nutrient/Eutrophication Biological Indicators	40317
					PCBs in Fish Tissue	
					Phosphorus, Total	40317
					Temperature	
Charles River	MA72-36	From Watertown Dam (NATID: MA00456), Watertown to the Boston University Bridge, Boston/Cambridge (formerly part of 2006 segment: Charles River MA72-08).	6.10	Miles	(Fish Passage Barrier*)	
					(Flow Regime Modification*)	
					(Non-Native Fish/Shellfish/Zooplankton*)	
					(Water Chestnut*)	
					Chlorophyll-a	33826
					DDT in Fish Tissue	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	32371
					Fish Bioassessments	
					Harmful Algal Blooms	33826
					Nutrient/Eutrophication Biological Indicators	33826
					Oil and Grease	
					PCBs in Fish Tissue	
					pH, High	
					Phosphorus, Total	33826
					Sediment Bioassay [Acute Toxicity Freshwater]	
					Transparency / Clarity	33826
					Unspecified Metals in Sediment	
Charles River	MA72-38	From Boston University Bridge, Boston/Cambridge to mouth at the New Charles River Dam (NATID: MA01092), Boston (formerly part of 2006 segment: Charles River MA72-08).	3.10	Miles	(Fish Passage Barrier*)	
					(Flow Regime Modification*)	
					Cause Unknown [Sediment Screening Value (Exceedance)]	
					Chlorophyll-a	33826
					Combined Biota/Habitat Bioassessments	
					DDT in Fish Tissue	
					Dissolved Oxygen	
					Dissolved Oxygen Supersaturation	33826
					Escherichia Coli (E. Coli)	32371



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
					Harmful Algal Blooms	33826
					Nutrient/Eutrophication Biological Indicators	33826
					Odor	33826
					Oil and Grease	
					PCBs in Fish Tissue	
					Phosphorus, Total	33826
					Salinity	
					Temperature	
					Transparency / Clarity	33826
Cheese Cake Brook	MA72-29	Emerges south of Route 16, Newton to mouth at confluence with the Charles River, Newton.	1.40	Miles	(Alteration in stream-side or littoral vegetative covers*)	
					(Other anthropogenic substrate alterations*)	
					Algae	40317
					Dissolved Oxygen Supersaturation	40317
					Escherichia Coli (E. Coli)	32380
					Fish Bioassessments	
					Phosphorus, Total	40317
Chicken Brook	MA72-34	Source, outlet Waseeka Sanctuary Pond, Holliston to mouth at confluence with the Charles River, Medway.	7.40	Miles	Escherichia Coli (E. Coli)	
Crystal Lake	MA72030	Newton.	27.00	Acres	Harmful Algal Blooms	
Fuller Brook	MA72-18	Headwater south of Route 135, Needham to mouth at confluence with Waban Brook, Wellesley (one culverted portion approximately 360 feet (0.07mile)).	4.30	Miles	(Physical substrate habitat alterations*)	
					Escherichia Coli (E. Coli)	32374
					Nutrient/Eutrophication Biological Indicators	40317
					Sedimentation/Siltation	
Hobbs Brook	MA72-45	Headwaters west of Bedford Road, Lincoln to inlet Cambridge Reservoir, Upper Basin, Lincoln	2.40	Miles	Chloride	
Hobbs Brook	MA72-46	From outlet Cambridge Reservoir, Waltham to mouth at confluence with Stony Brook, Weston.	1.80	Miles	Chloride	
Hopping Brook	MA72-35	Source in Cedar Swamp, Holliston to mouth at confluence with the Charles River, Bellingham/Medway.	4.90	Miles	Escherichia Coli (E. Coli)	
Jamaica Pond	MA72052	Boston.	67.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					Dissolved Oxygen	
					Phosphorus, Total	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Kendrick Street Pond	MA72055	Needham.	39.00	Acres	Turbidity	
Lake Winthrop	MA72140	Holliston.	131.00	Acres	(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					2,3,7,8-Tetrachlorodibenzo-p-dioxin	
					Aquatic Plants (Macrophytes)	40319
Mill River	MA72-15	Headwaters, outlet Bush Pond, Norfolk to mouth at confluence with the Charles River, Norfolk.	3.50	Miles	(Curly-leaf Pondweed*)	
					(Non-Native Aquatic Plants*)	
					Temperature	
Mine Brook	MA72-14	Headwaters in Franklin State Forest, Franklin to mouth at confluence with the Charles River, Franklin (through former 2006 segment: Mine Brook Pond MA72077) (HQW applies upstream of former Franklin WWTP discharge, approximately 4 miles upstream of mouth (note: Franklin WWTP tied into Medway (CRWPCD) on 15 January 1980)).	8.90	Miles	(Habitat Assessment*)	
					Escherichia Coli (E. Coli)	
					Temperature	
Muddy River	MA72-11	Headwaters, outlet Ward Pond in Olmstead Park, Boston through Leverett Pond, Boston/Brookline to confluence with Charles River, Boston (four culverted portions totaling approximately 2200 feet (0.42mile)).	3.60	Miles	(Bottom Deposits*)	
					(Flow Regime Modification*)	
					(Non-Native Aquatic Plants*)	
					(Physical substrate habitat alterations*)	
					DDT in Fish Tissue	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	32383
					Odor	
					Oil and Grease	
					PCBs in Fish Tissue	
					Phosphorus, Total	
					Turbidity	
					Unspecified Metals in Sediment	
Populatic Pond	MA72096	Norfolk.	42.00	Acres	Algae	40319
					Chlordane in Fish Tissue	
					DDT in Fish Tissue	
					Dissolved Oxygen	40319
					Dissolved Oxygen Supersaturation	40319
					Mercury in Fish Tissue	33880
					Nutrient/Eutrophication Biological Indicators	40319
Powissett Brook	MA72-20	Headwaters, outlet Noannet Pond, Westwood to mouth at confluence with the Charles River, Dover.	1.90	Miles	Combined Biota/Habitat Bioassessments	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Rock Meadow Brook	MA72-21	Headwaters, Fisher Meadow, Westwood to mouth at confluence with the Charles River, Dedham.	3.80	Miles	Algae	40317
					Benthic Macroinvertebrates	
					Dissolved Oxygen	40317
					Nutrient/Eutrophication Biological Indicators	40317
					Organic Enrichment (Sewage) Biological Indicators	
					Phosphorus, Total	40317
Sawmill Brook	MA72-23	Headwaters, Newton to mouth at confluence with the Charles River, Boston.	2.40	Miles	Chloride	
					Dissolved Oxygen	40317
					Escherichia Coli (E. Coli)	32376
					Organic Enrichment (Sewage) Biological Indicators	40317
					Phosphorus, Total	40317
Seaverns Brook	MA72-44	Headwaters outlet Norumbega Reservoir, Weston to mouth at confluence with the Charles River, Weston.	1.60	Miles	Escherichia Coli (E. Coli)	
South Meadow Brook	MA72-24	From emergence west of Parker Street, Newton to mouth at confluence with the Charles River, Newton (three culverted portions totaling approximately 2870 feet (0.54mile)).	1.70	Miles	(Bottom Deposits*)	
					(Debris*)	
					(Physical substrate habitat alterations*)	
					Dissolved Oxygen	40317
					Escherichia Coli (E. Coli)	32377
					Fish Bioassessments	
					Phosphorus, Total	40317
					Trash	
Stony Brook	MA72-26	Headwaters, outlet Beaver Pond, Lincoln to mouth at inlet Stony Brook Reservoir, Waltham/Weston (mileage includes length of braid).	5.10	Miles	Turbidity	40317
					Temperature	
Stop River	MA72-09	Headwaters south of Route 1A, Wrentham to Norfolk-Walpole MCI discharge (NPDES: MA0102253), Norfolk (through former 2006 segment: Highland Lake MA72047).	4.90	Miles	Ambient Bioassays - Chronic Aquatic Toxicity	
					Dissolved Oxygen	40317
					Phosphorus, Total	40317
Trout Brook	MA72-19	Headwaters, outlet Channings Pond, Dover to mouth at confluence with the Charles River, Dover.	2.80	Miles	Nutrient/Eutrophication Biological Indicators	40317
					Temperature	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Unnamed Tributary	MA72-30	Locally known as "Laundry Brook" - emerges north of California Street, Watertown to mouth at confluence with the Charles River, Watertown (stream not depicted on 1987 Newton USGS map).	0.02	Miles	(Physical substrate habitat alterations*)	
					Enterococcus	32381
					Escherichia Coli (E. Coli)	32381
					Odor	
					Phosphorus, Total	
					Total Suspended Solids (TSS)	
					Turbidity	
Unnamed Tributary	MA72-31	Locally known as "Millers River" - from emergence near Route 93, Cambridge/Boston to mouth at confluence with the Charles River, Cambridge.	0.20	Miles	(Bottom Deposits*)	
					(Debris*)	
					(Habitat Assessment*)	
					Flocculant Masses	
					Odor	
					Oil and Grease	
					Petroleum Hydrocarbons	
					Polychlorinated Biphenyls (PCBs)	
					Polycyclic Aromatic Hydrocarbons (PAHs)	
					(Aquatic Ecosystems)	
					Scum/Foam	
					Sedimentation/Siltation	
					Trash	
					Turbidity	
					Unspecified Metals in Sediment	
Unnamed Tributary	MA72-41	Unnamed tributary to the Charles River, outlet Lyman's Pond, Dover to mouth at confluence with the Charles River, Dover.	0.50	Miles	Escherichia Coli (E. Coli)	
Unnamed Tributary	MA72-42	Unnamed tributary to the Charles River, from outlet unnamed pond north of South Street, Natick to mouth at confluence with the Charles River, Natick.	0.30	Miles	Benthic Macroinvertebrates	
Unnamed Tributary	MA72-43	Unnamed tributary to Morses Pond, headwaters outlet Reeds Pond, Wellesley to mouth at confluence with Morses Pond, Wellesley.	0.20	Miles	Escherichia Coli (E. Coli)	
Unnamed Tributary	MA72-47	Headwaters west of Forbes Road, Lexington to mouth at confluence with Hobbs Brook, Lincoln.	0.80	Miles	Chloride	
Unnamed Tributary	MA72-48	Headwaters northeast of the Trapelo Road/Smith Street intersection, Waltham to mouth at inlet Cambridge Reservoir, Lexington.	0.90	Miles	Chloride	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Waban Brook	MA72-17	Headwaters, outlet Lake Waban, Wellesley to mouth at confluence with the Charles River, Wellesley.	0.70	Miles	Temperature	
Chicopee						
Abbey Brook	MA36-40	Headwaters west of Saint James Avenue, Springfield (through former 2008 segment: Bemis Pond MA36011) to mouth at confluence with the Chicopee River, Chicopee.	1.50	Miles	Escherichia Coli (E. Coli) Total Suspended Solids (TSS)	
Alden Pond	MA36003	Ludlow.	4.00	Acres	Nutrient/Eutrophication Biological Indicators	
Asnacomet Pond	MA36005	Hubbardston.	126.00	Acres	Dissolved Oxygen	
Brookhaven Lake	MA36021	West Brookfield.	34.00	Acres	Turbidity	
Browning Pond	MA36025	Oakham/Spencer.	106.00	Acres	(Non-Native Aquatic Plants*) Mercury in Fish Tissue Nutrient/Eutrophication Biological Indicators	3626
Chicopee Brook	MA36-21	Headwaters, east of Peaked Mountain, Monson (through former 2008 segment: Chicopee Brook Pond MA36031) to mouth at confluence with Quaboag River, Monson.	9.90	Miles	Escherichia Coli (E. Coli) Temperature	
Chicopee River	MA36-22	Source, confluence of Ware River and Quaboag River, Palmer (through former 2008 segment: Red Bridge Impoundment MA36171) to Red Bridge Impoundment Dam (NATID: MA00723), Wilbraham/Ludlow.	2.80	Miles	(Eurasian Water Milfoil, Myriophyllum Spicatum*) Escherichia Coli (E. Coli) Mercury in Fish Tissue	
Chicopee River	MA36-24	Wilbraham Pumping Station (old WWTP), Wilbraham/Ludlow to Chicopee Falls Dam (NATID: MA00719), Chicopee.	8.80	Miles	(Water Chestnut*) Escherichia Coli (E. Coli) Fecal Coliform	
Chicopee River	MA36-25	Chicopee Falls Dam (NATID: MA00719), Chicopee to mouth at confluence with Connecticut River, Chicopee.	3.00	Miles	Escherichia Coli (E. Coli)	
Danforth Brook	MA36-50	Headwaters, east of Charity Road, Hardwick to mouth at confluence with Ware River, Hardwick.	5.80	Miles	Escherichia Coli (E. Coli)	
Dean Pond	MA36050	Oakham.	64.00	Acres	Algae Turbidity	
Doane Pond	MA36054	North Brookfield.	28.00	Acres	Aquatic Plants (Macrophytes)	
Dunn Brook	MA36-19	From confluence with Forget-Me-Not Brook, East Brookfield/Brookfield to mouth at confluence with Quaboag River, Brookfield.	2.40	Miles	Dissolved Oxygen Phosphorus, Total	
Eames Pond	MA36056	Paxton.	58.00	Acres	Dissolved Oxygen	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
East Brookfield River	MA36-13	Headwaters, outlet Lake Lashaway, East Brookfield to mouth at inlet Quaboag Pond, East Brookfield.	2.40	Miles	(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Dissolved Oxygen	
Forget-Me-Not Brook	MA36-18	Headwaters, North Brookfield to North Brookfield WWTP discharge (NPDES: MA0101061), North Brookfield.	1.20	Miles	Escherichia Coli (E. Coli)	
					Lack of a coldwater assemblage	
Forget-Me-Not Brook	MA36-28	North Brookfield WWTP discharge (NPDES: MA0101061), North Brookfield to mouth at confluence with Dunn Brook, East Brookfield/Brookfield.	1.30	Miles	Benthic Macroinvertebrates	
Fuller Brook	MA36-41	From the Ludlow/Chicopee corporate boundary where the stream name changes from Higher Brook, to mouth at confluence with the Chicopee River, Chicopee.	1.90	Miles	Escherichia Coli (E. Coli)	
Hardwick Pond	MA36066	Hardwick.	67.00	Acres	(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	
Kings Brook	MA36-48	Headwaters, west of Saint John Street, Palmer to mouth at confluence with Quaboag River, Palmer.	3.30	Miles	Temperature	
Lake Lorraine	MA36084	Springfield.	28.00	Acres	(Non-Native Aquatic Plants*)	
					Dissolved Oxygen	
					Enterococcus	
Lake Whittemore	MA36165	Spencer.	52.00	Acres	Turbidity	
Long Pond	MA36082	Rutland.	167.00	Acres	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	
Prince River	MA36-08	Headwaters, outlet Hemingway Pond, Barre to mouth at confluence with Ware River, Barre (excluding approximately 0.6 miles through Old Reservoir, segment MA36114).	7.10	Miles	Escherichia Coli (E. Coli)	
Quaboag Pond	MA36130	Brookfield/East Brookfield.	544.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Algae	33846
					Mercury in Fish Tissue	
					Phosphorus, Total	33846
Quaboag River	MA36-14	Headwaters, outlet Quaboag Pond, Brookfield to Route 67 bridge, West Brookfield.	6.10	Miles	Dissolved Oxygen	
Quaboag River	MA36-15	Route 67 bridge, West Brookfield to Warren WWTP discharge (NPDES: MA0101567), Warren.	6.20	Miles	Dissolved Oxygen	
					Escherichia Coli (E. Coli)	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Quaboag River	MA36-16	Warren WWTP discharge (NPDES: MA0101567), Warren to Route 32 bridge, Palmer/Monson (mileage includes length of braids).	8.70	Miles	Escherichia Coli (E. Coli)	
					Fecal Coliform	
Quaboag River	MA36-17	Route 32 bridge, Palmer/Monson to mouth at confluence with Ware River (forming headwaters of Chicopee River), Palmer.	5.30	Miles	Escherichia Coli (E. Coli)	
Sevenmile River	MA36-11	Headwaters, outlet Browning Pond, Spencer to confluence with Cranberry River, Spencer.	7.30	Miles	Dissolved Oxygen	
					Escherichia Coli (E. Coli)	
Sevenmile River	MA36-12	Confluence with Cranberry River, Spencer to mouth at confluence with East Brookfield River, East Brookfield.	2.50	Miles	Escherichia Coli (E. Coli)	
Silver Brook	MA36-72	Headwaters, perennial portion east of Spring Hill Road, Barre to mouth at confluence with East Branch Swift River, Petersham (excluding the approximately 0.5 mile through Carter Pond, Petersham).	2.00	Miles	Temperature	
Twelvemile Brook	MA36-53	Headwaters, perennial portion west of Zuell Hill Road, Monson to mouth at confluence with Chicopee River, Wilbraham (excluding the approximately 0.25 miles through Pulpit Rock Pond, Monson).	7.20	Miles	Temperature	
Unnamed Tributary	MA36-39	Unnamed tributary to the Chicopee River locally known as "Poor Brook" from headwaters near the Conrail tracks, Springfield to mouth at confluence with the Chicopee River, Chicopee.	2.20	Miles	(Bacterial Slimes*)	
					(Debris*)	
					Escherichia Coli (E. Coli)	
					Trash	
Ware River	MA36-03	MDC intake, Barre to dam at South Barre Reservoir (NATID: MA00091), Barre (through former 2008 segments: Powder Mill Pond MA36126 and South Barre Reservoir MA36141).	2.10	Miles	Lack of a coldwater assemblage	
					Mercury in Fish Tissue	
					Temperature	
Ware River	MA36-05	Wheelwright Pond Dam (NATID: MA00616), New Braintree/Hardwick to Ware Impoundment dam (NATID: MA00594), Ware.	11.50	Miles	(Non-Native Aquatic Plants*)	
					Escherichia Coli (E. Coli)	
Ware River	MA36-06	Ware Impoundment dam (NATID: MA00594), Ware to Thorndike Dam (NATID: MA00563), Palmer.	10.10	Miles	(Non-Native Aquatic Plants*)	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
Concord (SuAsCo)						
Assabet River	MA82B-01	Headwaters, outlet Assabet River Reservoir, Westborough to the Westborough WWTP discharge (NPDES: MA0100412), Westborough.	1.20	Miles	(Dewatering*)	
					Benthic Macroinvertebrates	
					Fish Bioassessments	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Assabet River	MA82B-02	From the Westborough WWTP discharge (NPDES: MA0100412), Westborough to the dam (NATID: MA02843) Route 20, Northborough.	3.80	Miles	(Aquatic Plants (Macrophytes)*)	
					(Curly-leaf Pondweed*)	
					Algae	35104
					Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	35104
Assabet River	MA82B-03	From the dam (NATID: MA02843) Route 20, Northborough to the Marlborough West WWTP discharge (NPDES: MA0100480), Marlborough.	2.40	Miles	(Curly-leaf Pondweed*)	
					(Debris*)	
					Algae	35105
					Ambient Bioassays - Chronic Aquatic Toxicity	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	35105
					Odor	
					Phosphorus, Total	35105
					Trash	
Assabet River	MA82B-04	From the Marlborough West WWTP discharge (NPDES: MA0100480), Marlborough to the Hudson WWTP discharge (NPDES: MA0101788), Hudson.	8.00	Miles	(Water Chestnut*)	
					Algae	35106
					Benthic Macroinvertebrates	
					Dissolved Oxygen	35106
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Fish Bioassessments	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	35106
Assabet River	MA82B-05	From the Hudson WWTP discharge (NPDES: MA0101788), Hudson to the USGS gage (#01097000) at Routes 27/62, Maynard.	8.20	Miles	(Curly-leaf Pondweed*)	
					(Debris*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Water Chestnut*)	
					Algae	35107
					Dissolved Oxygen	35107
					Escherichia Coli (E. Coli)	
					Fecal Coliform	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
					Nutrient/Eutrophication Biological Indicators	35107
					Odor	
					Phosphorus, Total	35107
					Trash	
Assabet River	MA82B-06	From the USGS gage (#01097000) at Routes 27/62, Maynard to the Powdermill Dam (NATID: MA00128), Acton.	1.20	Miles	(Curly-leaf Pondweed*)	
					(Fanwort*)	
					(Water Chestnut*)	
					Dissolved Oxygen	35108
					Other Organics	
					Unspecified Metals in Sediment	
Assabet River	MA82B-07	From the Powdermill Dam (NATID: MA00128), Acton to mouth at confluence with the Sudbury River (forming headwaters Concord River), Concord.	6.40	Miles	Escherichia Coli (E. Coli)	
					Fecal Coliform	
Assabet River Reservoir	MA82004	Westborough.	355.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Water Chestnut*)	
					Algae	
					Dissolved Oxygen	
					Dissolved Oxygen Supersaturation	
					Mercury in Fish Tissue	33880
					Turbidity	
Beaver Brook	MA82A-34	Headwaters south at Rack Road, Chelmsford to mouth at confluence with River Meadow Brook, Chelmsford.	6.30	Miles	Dissolved Oxygen	
					Escherichia Coli (E. Coli)	
Carding Mill Pond	MA82015	Sudbury.	40.00	Acres	(Curly-leaf Pondweed*)	
					(Water Chestnut*)	
					Algae	
					Aquatic Plants (Macrophytes)	
					Dissolved Oxygen Supersaturation	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
Coles Brook	MA82B-22	Headwaters, east of Francine Road, Acton to mouth at confluence with Fort Pond Brook, Acton.	2.00	Miles	Chloride	
					Escherichia Coli (E. Coli)	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Concord River	MA82A-07	Headwaters, confluence Assabet and Sudbury rivers, Concord to Billerica Water Supply intake, Billerica.	10.40	Miles	(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					(Non-Native Fish/Shellfish/Zooplankton*)	
					(Water Chestnut*)	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Mercury in Fish Tissue	
Concord River	MA82A-08	From Billerica Water Supply intake, Billerica to Rogers Street bridge, Lowell.	5.10	Miles	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Fish Passage Barrier*)	
					(Non-Native Aquatic Plants*)	
					(Water Chestnut*)	
					Mercury in Fish Tissue	
Concord River	MA82A-09	From Rogers Street bridge, Lowell to mouth at confluence with the Merrimack River, Lowell.	0.90	Miles	(Debris*)	
					Algae	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Mercury in Fish Tissue	
					Trash	
Dean Park Pond	MA82026	Shrewsbury.	7.00	Acres	Turbidity	
Dudley Pond	MA82029	Wayland.	83.00	Acres	Harmful Algal Blooms	
					(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Non-Native Fish/Shellfish/Zooplankton*)	
					Dissolved Oxygen	
Eames Brook	MA82A-13	Headwaters, outlet Farm Pond, Framingham to mouth at confluence with the Sudbury River, Framingham.	0.60	Miles	Turbidity	
					(Debris*)	
					Algae	
					Benthic Macroinvertebrates	
					Odor	
Elizabeth Brook	MA82B-12	From the outlet of an unnamed pond (Delaney Project on Stow/Harvard border) west of Harvard Road, Stow to mouth at inlet of Fletchers Pond, Stow.	3.70	Miles	Trash	
					Escherichia Coli (E. Coli)	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Farm Pond	MA82035	Framingham.	139.00	Acres	(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					Algae	
					Turbidity	
Farrar Pond	MA82036	Lincoln	83.00	Acres	Mercury in Fish Tissue	
Fort Meadow Reservoir	MA82042	Marlborough/Hudson.	254.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Chlordane in Fish Tissue	
					Phosphorus, Total	
Framingham Reservoir #1	MA82044	Framingham.	117.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Non-Native Aquatic Plants*)	
					(Water Chestnut*)	
					Mercury in Fish Tissue	
Framingham Reservoir #2	MA82045	Framingham/Ashland.	114.00	Acres	Mercury in Fish Tissue	
					Turbidity	
Grist Mill Pond	MA82055	Sudbury/Marlborough.	17.00	Acres	(Curly-leaf Pondweed*)	
					(Water Chestnut*)	
					Algae	
					Dissolved Oxygen Supersaturation	
					Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
Hager Pond	MA82056	Marlborough.	30.00	Acres	(Curly-leaf Pondweed*)	
					(Water Chestnut*)	
					Algae	
					Dissolved Oxygen Supersaturation	
					Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
					Turbidity	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Heard Pond	MA82058	Wayland.	76.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Water Chestnut*)	
					Algae	
					Mercury in Fish Tissue	
					Transparency / Clarity	
Heart Pond	MA82059	Chelmsford/Westford.	94.00	Acres	(Non-Native Fish/Shellfish/Zooplankton*)	
					(Water Chestnut*)	
					Escherichia Coli (E. Coli)	
					Mercury in Fish Tissue	
Hocomonco Pond	MA82060	Westborough.	27.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					Polycyclic Aromatic Hydrocarbons (PAHs) (Aquatic Ecosystems)	
Hop Brook	MA82A-05	Headwaters, outlet Carding Mill Pond, Sudbury to confluence with Allowance Brook, Sudbury (through former 2014 segment: Stearns Mill Pond MA82104) (prior to 1987, USGS topographic quadrangles depicted Allowance Brook as Landham Brook) (prior to 1998 this segment included waters between Marlborough East WWTP and Carding Mill Pond outlet).	6.70	Miles	(Water Chestnut*)	
					Algae	
					Benthic Macroinvertebrates	
					Dissolved Oxygen	
					Dissolved Oxygen Supersaturation	
					Escherichia Coli (E. Coli)	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
Hop Brook	MA82A-06	From the confluence of Allowance Brook, Sudbury to mouth at confluence with the Sudbury River, Wayland (MA82A-06 changed from Wash Brook to Hop Brook in 2006: prior to 1987 USGS topographic quadrangles depicted this stretch of river as Wash Brook and Allowance Brook as Landham Brook).	3.00	Miles	Turbidity	
					Dissolved Oxygen	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
Hopkinton Reservoir	MA82061	Hopkinton/Ashland.	161.00	Acres	(Non-Native Aquatic Plants*)	
					Dissolved Oxygen	
Lake Cochituate	MA82020	[North Basin] Natick/Framingham/Wayland.	196.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					Dissolved Oxygen	
					PCBs in Fish Tissue	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Lake Cochituate	MA82125	[Middle Basin] Natick/Wayland.	134.00	Acres	(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Non-Native Aquatic Plants*)	
					(Non-Native Fish/Shellfish/Zooplankton*)	
					Dissolved Oxygen	
					Enterococcus	
					PCBs in Fish Tissue	
Lake Cochituate	MA82126	[Carling Basin] Natick.	14.00	Acres	(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Non-Native Aquatic Plants*)	
					(Non-Native Fish/Shellfish/Zooplankton*)	
					(Water Chestnut*)	
					PCBs in Fish Tissue	
Lake Cochituate	MA82127	[South Basin] Natick.	239.00	Acres	(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Non-Native Aquatic Plants*)	
					(Water Chestnut*)	
					Dissolved Oxygen	
					PCBs in Fish Tissue	
Little Chauncy Pond	MA82070	Northborough.	43.00	Acres	(Curly-leaf Pondweed*)	
					(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	
Long Pond	MA82072	Littleton.	102.00	Acres	Algae	
					Dissolved Oxygen	
					Phosphorus, Total	
Nashoba Brook	MA82B-14	From source just south of Route 110, Westford to mouth at confluence with Fort Pond Brook, Concord (through former 2014 segment: Ice House Pond MA82066).	9.40	Miles	(Dewatering*)	
					Escherichia Coli (E. Coli)	
					Temperature	
North Brook	MA82B-21	Headwaters, east of Ballville Road and north of Wataquodock Hill Road, Bolton to mouth at confluence with the Assabet River, Berlin (excluding the approximately 0.1 mile through Wataquatic Pond (locally 'Fyfeshire Pond'), Bolton).	7.60	Miles	(Curly-leaf Pondweed*)	
					Temperature	
Nutting Lake	MA82088	[East Basin] Billerica.	30.00	Acres	(Water Chestnut*)	
					Escherichia Coli (E. Coli)	
					Mercury in Fish Tissue	33880



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Pantry Brook	MA82A-19	From source west of Haynes Road, Sudbury to mouth at confluence with the Sudbury River, Sudbury.	3.10	Miles	Fecal Coliform	
Puffers Pond	MA82092	Maynard/Sudbury.	28.00	Acres	Mercury in Fish Tissue	
River Meadow Brook	MA82A-10	Headwaters, outlet Russell Mill Pond, Chelmsford to mouth at confluence with the Concord River, Lowell.	6.40	Miles	(Debris*)	
					(Water Chestnut*)	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Temperature	
Saxonville Pond	MA82097	Framingham.	59.00	Acres	Trash	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					(Water Chestnut*)	
					Aquatic Plants (Macrophytes)	
Sudbury River	MA82A-03	Outlet Saxonville Pond, Framingham to confluence with Hop Brook (the lower portion of Hop Brook was identified as Wash Brook on USGS quads prior to 1987), Wayland.	5.50	Miles	Mercury in Fish Tissue	
					(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Non-Native Fish/Shellfish/Zooplankton*)	
					(Water Chestnut*)	
					Escherichia Coli (E. Coli)	
					Fish Bioassessments	
					Mercury in Fish Tissue	
					(Water Chestnut*)	
Sudbury River	MA82A-04	Confluence with Hop Brook (the lower portion of Hop Brook was identified as Wash Brook on USGS topographic quadrangles prior to 1987), Wayland to confluence with Assabet River (forming headwaters Concord River), Concord.	11.70	Miles	Mercury in Fish Tissue	
Sudbury River	MA82A-25	From the Fruit Street bridge Hopkinton/Westborough to the inlet of Framingham Reservoir #2, Ashland (formerly part of 2004 segment: Sudbury River MA82A-02).	6.30	Miles	(Water Chestnut*)	
					Escherichia Coli (E. Coli)	
					Mercury in Fish Tissue	
Sudbury River	MA82A-26	Outlet Framingham Reservoir #1, Framingham to inlet of Saxonville Pond, Framingham (formerly part of 2004 segment: Sudbury River MA82A-02).	2.80	Miles	(Water Chestnut*)	
					Benthic Macroinvertebrates	
					Mercury in Fish Tissue	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Unnamed Tributary	MA82A-15	Headwaters, northeast of Indian Head Hill (near Route 20), Marlborough to mouth at inlet of Hager Pond, Marlborough (formerly part of 1996 segment: Hop Brook MA82A-05).	1.10	Miles	Algae	
					Ambient Bioassays - Chronic Aquatic Toxicity	
					Dissolved Oxygen	
					Phosphorus, Total	
					Total Suspended Solids (TSS)	
Unnamed Tributary	MA82A-16	Headwaters, outlet Hager Pond, Marlborough to mouth at inlet of Grist Mill Pond, Marlborough (formerly part of 1996 segment: Hop Brook MA82A-05).	0.20	Miles	Algae	
					Dissolved Oxygen	
					Dissolved Oxygen Supersaturation	
					pH, High	
					Phosphorus, Total	
Unnamed Tributary	MA82A-17	Headwaters, outlet Grist Mill Pond, Sudbury to mouth at inlet of Carding Mill Pond, Sudbury (formerly part of 1996 segment: Hop Brook MA82A-05).	0.50	Miles	Algae	
					Dissolved Oxygen	
					Dissolved Oxygen Supersaturation	
					Phosphorus, Total	
					Total Suspended Solids (TSS)	
Unnamed Tributary	MA82A-22	Unnamed tributary to the Sudbury River locally known as Cochituate Brook, headwaters, outlet north basin of Lake Cochituate, Framingham to mouth at confluence with Sudbury River, Framingham.	1.40	Miles	(Curly-leaf Pondweed*)	
					(Debris*)	
					Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	
					Nutrient/Eutrophication Biological Indicators	
					Trash	
Waushakum Pond	MA82112	Framingham/Ashland.	87.00	Acres	(Non-Native Aquatic Plants*)	
					Chlorophyll-a	
					Dissolved Oxygen	
					Phosphorus, Total	
					Turbidity	
White Pond	MA82118	Concord.	36.00	Acres	Dissolved Oxygen	
					Harmful Algal Blooms	
Whitehall Reservoir	MA82120	Hopkinton.	560.00	Acres	(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Dissolved Oxygen	
					Mercury in Fish Tissue	33880
					Phosphorus, Total	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Connecticut						
Arcadia Lake	MA34005	Belchertown.	32.00	Acres	(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Nutrient/Eutrophication Biological Indicators	
Atkins Reservoir	MA34006	Shutesbury/Amherst.	46.00	Acres	Mercury in Fish Tissue	
Bachelor Brook	MA34-07	Outlet Forge Pond, Granby to mouth at confluence with Connecticut River, South Hadley (through former 2006 segments: Aldrich Lake [East Basin] MA34002 and Aldrich Lake [West Basin] MA34106).	11.50	Miles	(Water Chestnut*)	
					Escherichia Coli (E. Coli)	
Barton Cove	MA34122	Gill (cove of Connecticut River upstream of Turners Falls dams (NATID: MA00848 and MA00849)).	160.00	Acres	(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Water Chestnut*)	
					Escherichia Coli (E. Coli)	
Bloody Brook	MA34-36	Headwaters, perennial portion, from the railroad tracks north of North Main Street, Deerfield to mouth at confluence with Mill River, Whately.	3.70	Miles	PCBs in Fish Tissue	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	
					Phosphorus, Total	
Buttery Brook	MA34-42	Headwaters (perennial portion), west of Haig Avenue, South Hadley to mouth at confluence with the Connecticut River, South Hadley (interrupted urban, approximately 1200 feet culverted).	1.60	Miles	Turbidity	
					Escherichia Coli (E. Coli)	
Connecticut River	MA34-01	New Hampshire/Massachusetts state line, Northfield to Route 10 bridge, Northfield.	3.50	Miles	(Alteration in stream-side or littoral vegetative covers*)	
					(Flow Regime Modification*)	
					PCBs in Fish Tissue	
Connecticut River	MA34-02	Route 10 bridge, Northfield to Turners Falls dams (NATID: MA00848 and MA00849), Gill/Montague (excluding the delineated segment; Barton Cove MA34019).	11.40	Miles	(Alteration in stream-side or littoral vegetative covers*)	
					(Flow Regime Modification*)	
					(Water Chestnut*)	
					PCBs in Fish Tissue	
Connecticut River	MA34-03	Turners Falls dams (NATID: MA00848 and MA00849), Gil/Montague to confluence with Deerfield River, Greenfield/Deerfield.	3.70	Miles	(Dewatering*)	
					(Flow Regime Modification*)	
					Escherichia Coli (E. Coli)	
					PCBs in Fish Tissue	
					Total Suspended Solids (TSS)	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Connecticut River	MA34-04	Confluence with Deerfield River, Greenfield/Deerfield to Holyoke Dam (NATID: MA00973), Holyoke/South Hadley.	34.50	Miles	(Water Chestnut*)	
					Escherichia Coli (E. Coli)	
					PCBs in Fish Tissue	
Connecticut River	MA34-05	Holyoke Dam (NATID: MA00973), Holyoke/South Hadley to Massachusetts/Connecticut border, Longmeadow.	15.90	Miles	Escherichia Coli (E. Coli)	
					PCBs in Fish Tissue	
Forge Pond	MA34024	Granby.	72.00	Acres	(Water Chestnut*)	
					Nutrient/Eutrophication Biological Indicators	
Fort River	MA34-27	Headwaters (confluence of Adams and Amethyst brooks, Amherst), to mouth at confluence Connecticut River, Hadley.	12.80	Miles	Escherichia Coli (E. Coli)	
Lake Lookout	MA34044	Springfield.	7.00	Acres	Nutrient/Eutrophication Biological Indicators	
Lampson Brook	MA34-06	Belchertown WWTP discharge, Belchertown to mouth at confluence with Weston Brook, Belchertown.	1.00	Miles	Benthic Macroinvertebrates	
					Phosphorus, Total	
Leaping Well Reservoir	MA34040	South Hadley.	9.00	Acres	Algae	
Log Pond Cove	MA34124	Holyoke (cove of Connecticut River upstream of Holyoke Dam (NATID: MA00973)).	19.00	Acres	(Water Chestnut*)	
					PCBs in Fish Tissue	
Longmeadow Brook	MA34-21	Headwaters, outlet Turner Park Pond, Longmeadow to mouth at confluence with Connecticut River, Longmeadow.	4.50	Miles	(Debris*)	
					Escherichia Coli (E. Coli)	
					Phosphorus, Total	
					Trash	
					Turbidity	
Manhan River	MA34-11	Outlet Tighe Carmody Reservoir, Southampton to mouth at confluence with Connecticut River, Easthampton.	19.00	Miles	(Water Chestnut*)	
					Escherichia Coli (E. Coli)	
Metacomet Lake	MA34051	Belchertown.	51.00	Acres	(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Dissolved Oxygen	
Mill Pond	MA34052	Springfield.	13.00	Acres	Nutrient/Eutrophication Biological Indicators	
					Odor	
Mill River	MA34-24	Headwaters east of Fisher Hill, Conway to mouth at confluence with the Connecticut River, Hatfield.	24.60	Miles	Temperature	
Mill River	MA34-25	Headwaters, outlet Factory Hollow Pond, Amherst to mouth at inlet Lake Warner, Hadley.	5.20	Miles	Escherichia Coli (E. Coli)	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Mill River	MA34-28	Headwaters (confluence of East and West Branch Mill River, Williamsburg), to outlet Paradise Pond, Northampton.	10.00	Miles	Escherichia Coli (E. Coli)	
Mill River	MA34-29	Headwaters, outlet Watershops Pond, Springfield to mouth at confluence with Connecticut River, Springfield. (Interrupted stream).	1.30	Miles	(Debris*)	
					Escherichia Coli (E. Coli)	
					Odor	
					Trash	
Nashawannuck Pond	MA34057	Easthampton.	30.00	Acres	(Water Chestnut*)	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
Noonan Cove	MA34058	Springfield.	3.00	Acres	Aquatic Plants (Macrophytes)	
					Turbidity	
Oxbow	MA34066	The waterbody west of Route 91 (bounded on the northeast by Route 91, the southeast by the Manhan River, and the west by Old Springfield Road), Northampton/Easthampton (excluding the delineated segment; Danks Pond MA34019).	149.00	Acres	(Water Chestnut*)	
					Turbidity	
Porter Lake	MA34073	Springfield.	28.00	Acres	(Curly-leaf Pondweed*)	
					Algae	
					Aquatic Plants (Macrophytes)	
Porter Lake West	MA34072	Springfield.	5.00	Acres	Algae	
					Aquatic Plants (Macrophytes)	
Scantic River	MA34-30	Massachusetts/Connecticut border, Monson downstream to the Massachusetts/Connecticut border, Hampden.	9.60	Miles	Escherichia Coli (E. Coli)	
Stony Brook	MA34-19	Headwaters, Granby to mouth at confluence with Connecticut River, South Hadley (through former 2006 segments: Upper Pond MA34095 and Lower Pond MA34049).	13.30	Miles	(Water Chestnut*)	
					Escherichia Coli (E. Coli)	
					Turbidity	
Unnamed Tributary	MA34-60	Unnamed tributary to the Connecticut River, locally known as 'Willimansett Brook', headwaters, perennial portion, east of Memorial Drive (Route 33), Chicopee to mouth at confluence with Connecticut River, Chicopee (approximately 1200 feet culverted near mouth).	2.30	Miles	Escherichia Coli (E. Coli)	
Upper Van Horn Park Pond	MA34128	Springfield (formerly reported as 2000 segment: Upper Van Horn Park Pond MA36158).	8.00	Acres	Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Venture Pond	MA34096	Springfield.	7.00	Acres	Dissolved Oxygen	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
Watershops Pond	MA34099	Springfield.	161.00	Acres	Nutrient/Eutrophication Biological Indicators	
Weston Brook	MA34-23	Headwaters, south of State Street (Route 202), Belchertown to mouth at inlet Forge Pond, Granby (WWF applies from the confluence of Lampson Brook in Belchertown to the mouth).	2.70	Miles	Phosphorus, Total	
Wilton Brook	MA34-15	Headwaters, perennial portion, Easthampton to outlet RubberThread Pond, Easthampton (through former 2006 segment: RubberThread Pond MA34105).	1.10	Miles	(Water Chestnut*)	
					Aquatic Plants (Macrophytes)	
Deerfield						
Bear River	MA33-17	Headwaters, perennial portion west of Barnes Road, Ashfield to confluence with Deerfield River, Conway.	6.90	Miles	Temperature	
Cherry Rum Brook	MA33-97	Headwaters, northeast of Stoneleigh Burnham Drive, Greenfield to confluence with Green River, Greenfield.	2.10	Miles	Benthic Macroinvertebrates	
Davis Mine Brook	MA33-18	Headwaters, south of Dell Road, Rowe to confluence with Mill Brook, Charlemont.	3.30	Miles	Fish Bioassessments	
Deerfield River	MA33-03	Confluence with North River, Charlemont/Shelburne to confluence with Green River, Greenfield.	16.80	Miles	pH, Low	
					Escherichia Coli (E. Coli)	
Deerfield River	MA33-04	Confluence with Green River, Greenfield to confluence with Connecticut River, Greenfield/Deerfield.	2.00	Miles	Escherichia Coli (E. Coli)	
Dragon Brook	MA33-20	Headwaters, perennial portion north of Patten Road, Shelburne to confluence with the Deerfield River, Shelburne.	4.40	Miles	Temperature	
East Branch North River	MA33-19	Vermont line, Colrain to confluence with West Branch North River, Colrain.	7.50	Miles	Escherichia Coli (E. Coli)	
Green River	MA33-30	From Swimming Pool #2 Dam (National Dam ID MA02321) northwest of Nashs Mill Road, Greenfield to confluence with the Deerfield River, Greenfield (formerly reported as 2002 segment: Green River MA33-10 and part of 2002 segment: Green River MA33-09) (HQW applies upstream of former Greenfield WWTF discharge (NPDES# MA0101214), from approximately 0.5 mile upstream of mouth).	3.70	Miles	Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Turbidity	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Hinsdale Brook	MA33-21	Headwaters east of Fiske Mill Road, Shelburne to confluence with Punch Brook, Greenfield.	2.80	Miles	Escherichia Coli (E. Coli)	
Mill Brook	MA33-70	Headwaters, north of West Mountain Road, Bernardston to confluence with Cherry Rum Brook, Greenfield.	8.40	Miles	Benthic Macroinvertebrates	
Pelham Lake	MA33016	Rowe.	80.00	Acres	Mercury in Fish Tissue	
Sherman Reservoir	MA33018	Massachusetts portion only. Rowe/Monroe.	72.00	Acres	Mercury in Fish Tissue	
South River	MA33-07	Headwaters, outlet Ashfield Pond, Ashfield to Emmets Road, Ashfield.	2.30	Miles	Temperature	
South River	MA33-101	Emmets Road, Ashfield to confluence with Johnny Bean Brook, Conway (formerly part of MA33-08).	6.10	Miles	Escherichia Coli (E. Coli)	
					Fecal Coliform	
South River	MA33-102	From confluence with Johnny Bean Brook, Conway to confluence with Deerfield River, Conway (formerly part of MA33-08), (through South River Impoundment formerly segment MA33022).	6.80	Miles	(Physical substrate habitat alterations*)	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
Farmington						
Benton Brook	MA31-11	Headwaters, drainage from Hayden Swamp, Otis to mouth at confluence with the West Branch Farmington River, Otis.	5.20	Miles	Benthic Macroinvertebrates	
Big Pond	MA31004	Otis.	325.00	Acres	Dissolved Oxygen	
					Mercury in Fish Tissue	33880
Cranberry Pond Brook	MA31-21	Headwaters, outlet Cranberry Pond, Tolland to mouth at confluence with Slocum Brook, Tolland.	1.60	Miles	Lack of a coldwater assemblage	
Palmer Brook	MA31-29	Headwaters, outlet Palmer Brook Dam (NATID: MA00205), Becket to mouth at inlet Ward Pond, Becket.	2.10	Miles	Lack of a coldwater assemblage	
Pond Brook	MA31-33	Headwaters, outlet Noyes Pond, Tolland to mouth at confluence with Babcock Brook, Tolland.	2.00	Miles	Lack of a coldwater assemblage	
Shaw Pond	MA31036	Becket/Otis.	80.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					Dissolved Oxygen	
Spectacle Pond Brook	MA31-27	Headwaters, south of West Center Road, Otis to mouth at inlet Upper Spectacle Pond, Otis.	1.50	Miles	Lack of a coldwater assemblage	
Thomas Brook	MA31-06	Headwaters, outlet Thomas Pond, Becket to mouth at confluence with unnamed tributary to Hayden Pond, Otis.	0.80	Miles	Lack of a coldwater assemblage	
Upper Spectacle Pond	MA31044	Sandisfield/Otis.	53.00	Acres	Dissolved Oxygen	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
West Branch Farmington River	MA31-01	Headwaters, outlet Hayden Pond, Otis to the MA/CT border in the Colebrook Reservoir, Sandisfield/Tolland.	16.10	Miles	Lack of a coldwater assemblage	
					Temperature	
York Lake	MA31052	New Marlborough.	29.00	Acres	Dissolved Oxygen	
French						
Burncoat Brook	MA42-07	Headwaters, outlet Bouchard Pond, Leicester to mouth at confluence with Town Meadow Brook, Leicester (through former pond segment Ballard Hill Pond MA42069).	1.00	Miles	Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	
Carbuncle Pond	MA42008	Oxford.	11.00	Acres	Harmful Algal Blooms	
French River	MA42-03	Headwaters, outlet Greenville Pond, Leicester to the outlet of Thayers Pond, Oxford (excluding approximately 0.6 miles through Rochdale Pond segment MA42048) (through former pond segments Texas Pond MA42058 and Thayers Pond MA42059).	3.80	Miles	Mercury in Fish Tissue	
French River	MA42-04	From dam (NAT ID: MA01946) just upstream of Clara Barton Road, Oxford, to dam (NAT ID: MA00108) at North Village, Webster/Dudley.	9.60	Miles	Mercury in Fish Tissue	
French River	MA42-05	Dam (NAT ID: MA00108) at North Village, Webster/Dudley to Webster WWTP outfall (NPDES: MA0100439) , Webster/Dudley.	2.40	Miles	(Flow Regime Modification*)	
French River	MA42-06	Webster WWTP outfall (NPDES: MA0100439) , Webster/Dudley to state line, Dudley, MA/Thompson, CT.	1.00	Miles	Benthic Macroinvertebrates	
					Cause Unknown [Sediment Screening Value (Exceedance)]	
					Nutrients	
Grindstone Brook	MA42-18	Headwaters outlet Henshaw Pond, Leicester to mouth at inlet Rochdale Pond, Leicester.	2.30	Miles	Escherichia Coli (E. Coli)	
Little River	MA42-13	Headwaters, outlet Pikes Pond, Charlton to inlet Buffumville Lake, Charlton (formerly part of segment MA42-09).	3.50	Miles	Benthic Macroinvertebrates	
					Dissolved Oxygen	
Sucker Brook	MA42-15	Headwaters, outlet Nipmuck Pond, Webster to mouth at inlet Club Pond, Webster.	1.70	Miles	Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	
Webster Lake	MA42064	Webster.	1,275.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Non-Native Aquatic Plants*)	
					(Non-Native Fish/Shellfish/Zooplankton*)	
					Dissolved Oxygen	
Wellington Brook	MA42-11	Headwaters south of Cedar Street, Auburn to mouth at confluence with French River, Oxford.	3.40	Miles	Escherichia Coli (E. Coli)	
Housatonic						
Ashley Lake	MA21003	Washington.	94.00	Acres	Mercury in Fish Tissue	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
East Branch Housatonic River	MA21-02	Outlet of Center Pond, Dalton to mouth at confluence with the Housatonic River, Pittsfield.	8.00	Miles	Escherichia Coli (E. Coli)	
					Fecal Coliform	
					PCBs in Fish Tissue	
Goodrich Pond	MA21042	Pittsfield.	15.00	Acres	PCBs in Fish Tissue	
Goose Pond	MA21043	Lee/Tyringham.	238.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					Dissolved Oxygen	
Housatonic River	MA21-04	Headwaters, confluence of Southwest Branch Housatonic River and West Branch Housatonic River, Pittsfield to Woods Pond dam (NATID: MA00731), Lee/Lenox (through former 2006 segment: Woods Pond MA21120) (approximately one mile at headwaters formerly part of 1998 segment: West Branch Housatonic River MA21-03).	12.30	Miles	(Water Chestnut*)	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					PCBs in Fish Tissue	
					PCBs in Sediment	
Housatonic River	MA21-19	Outlet of Woods Pond dam (NATID: MA00731), Lee/Lenox to the Risingdale Impoundment dam (NATID: MA00250), Great Barrington (through former 2006 segment: Risingdale Impoundment MA21121) (formerly part of 1998 segment: Housatonic River MA21-05).	19.90	Miles	(Zebra Mussel, Dreissena Polymorph*)	
					Algae	
					Ambient Bioassays - Chronic Aquatic Toxicity	
					Fish Bioassessments	
					PCBs in Fish Tissue	
					PCBs in Sediment	
					Phosphorus, Total	
Housatonic River	MA21-20	Outlet of Risingdale Impoundment dam (NATID: MA00250), Great Barrington to the MA/CT border, Sheffield (formerly part of 1998 segment: Housatonic River MA21-05).	23.10	Miles	(Zebra Mussel, Dreissena Polymorph*)	
					PCBs in Fish Tissue	
Hubbard Brook	MA21-15	Headwaters, northwest of Townhouse Hill Road, Egremont to mouth at confluence with the Housatonic River, Sheffield (through former 2006 segment: Mill Pond MA21068).	9.40	Miles	(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Water Chestnut*)	
					Lack of a coldwater assemblage	
					Temperature	
Konkapot River	MA21-25	Headwaters, outlet Brewer Lake, Monterey to the MA/CT border, New Marlborough (formerly part of 1998 segment: Konkapot River MA21-13).	16.50	Miles	Mercury in Fish Tissue	
Konkapot River	MA21-26	From the MA/CT border, Sheffield, to mouth at confluence with the Housatonic River, Sheffield (formerly part of 1998 segment: Konkapot River MA21-13).	2.90	Miles	Mercury in Fish Tissue	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Lake Buel	MA21014	Monterey/New Marlborough.	191.00	Acres	(Brittle Naiad, Najas Minor*)	
					(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Non-Native Aquatic Plants*)	
					Dissolved Oxygen	
					Dissolved Oxygen Supersaturation	
					Phosphorus, Total	
Lake Garfield	MA21040	Monterey.	255.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					Dissolved Oxygen	
					Mercury in Fish Tissue	
					Phosphorus, Total	
Laurel Lake	MA21057	Lee/Lenox.	174.00	Acres	(Brittle Naiad, Najas Minor*)	
					(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Water Chestnut*)	
					(Zebra Mussel, Dreissena Polymorph*)	
					Dissolved Oxygen	
					Dissolved Oxygen Supersaturation	
Morewood Lake	MA21071	Pittsfield.	20.00	Acres	PCBs in Fish Tissue	
Onota Lake	MA21078	Pittsfield.	664.00	Acres	(Brittle Naiad, Najas Minor*)	
					(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Water Chestnut*)	
					Dissolved Oxygen	
Silver Lake	MA21097	Pittsfield.	27.00	Acres	PCBs in Fish Tissue	
Southwest Branch Housatonic River	MA21-17	Headwaters, outlet Richmond Pond, Pittsfield to mouth at confluence with West Branch Housatonic River (forming headwaters Housatonic River), Pittsfield.	5.80	Miles	Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Sedimentation/Siltation	
					Temperature	
Stockbridge Bowl	MA21105	Stockbridge.	384.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					Dissolved Oxygen	
					Mercury in Fish Tissue	33880



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
West Branch Housatonic River	MA21-18	Headwaters, outlet Pontoosuc Lake, Pittsfield to mouth at confluence with Southwest Branch Housatonic River (forming headwaters Housatonic River), Pittsfield (formerly part of 1998 segment: West Branch Housatonic River MA21-03).	4.10	Miles	(Debris*)	
					(Habitat Assessment*)	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Lack of a coldwater assemblage	
					PCBs in Sediment	
					Temperature	
					Trash	
Williams River	MA21-06	Headwaters, outlet Shaker Mill Pond, West Stockbridge to mouth at confluence with Housatonic River, Great Barrington.	11.00	Miles	Temperature	
Hudson: Hoosic						
Cheshire Reservoir, North Basin	MA11002	[North Basin] Cheshire.	284.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Non-Native Aquatic Plants*)	
					Nutrient/Eutrophication Biological Indicators	
Cheshire Reservoir, South Basin	MA11019	[South Basin] Cheshire/Lanesborough.	92.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Non-Native Aquatic Plants*)	
					Algae	
Hoosic River	MA11-03	Headwaters, outlet Cheshire Reservoir, Cheshire to Adams WWTP discharge (NPDES: MA0100315), Adams.	8.80	Miles	(Alteration in stream-side or littoral vegetative covers*)	
					(Flow Regime Modification*)	
					(Other anthropogenic substrate alterations*)	
					Ambient Bioassays - Chronic Aquatic Toxicity	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
Hoosic River	MA11-05	Confluence with North Branch Hoosic River, North Adams to the Vermont State line, Williamstown.	8.20	Miles	Temperature	
					(Alteration in stream-side or littoral vegetative covers*)	
					(Flow Regime Modification*)	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	
North Branch Hoosic River	MA11-01	Vermont State line, Clarksburg to USGS Gage (# 01332000), North Adams.	4.30	Miles	PCBs in Fish Tissue	
					Temperature	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
North Branch Hoosic River	MA11-02	From USGS Gage (# 01332000), North Adams to mouth at confluence with Hoosic River, North Adams.	1.50	Miles	(Alteration in stream-side or littoral vegetative covers*)	
					(Flow Regime Modification*)	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Polychlorinated Biphenyls (PCBs)	
Hudson: Kinderhook						
Kinderhook Creek	MA12-01	Headwaters, northwest of Sheeps Heaven Mountain and east of Route 43, Hancock to New York/Massachusetts border, Hancock.	5.50	Miles	Benthic Macroinvertebrates	
Ipswich						
Brackett Pond	MA92004	Andover.	16.00	Acres	Turbidity	
Collins Pond	MA92010	Andover.	2.00	Acres	Algae	
					Turbidity	
Crystal Pond	MA92013	Peabody.	9.00	Acres	Algae	
					Chlorophyll-a	
					Phosphorus, Total	
					Transparency / Clarity	
Devils Dishfull Pond	MA92015	Peabody.	14.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					Chlorophyll-a	
					Dissolved Oxygen	
					Phosphorus, Total	
					Turbidity	
Fish Brook	MA92-14	Headwater, outlet Stiles Pond, Boxford to confluence with Ipswich River, Topsfield/Boxford (through former 2014 segment: Howes Pond MA92026).	8.20	Miles	Escherichia Coli (E. Coli)	
Frye Pond	MA92023	Andover (formerly reported as 1998 segment: Frye Pond MA84082).	7.00	Acres	Algae	
Gravelly Brook	MA92-18	Headwaters, Willowdale State Forest, Ipswich to confluence with Ipswich River, Ipswich.	1.50	Miles	Benthic Macroinvertebrates	
Howlett Brook	MA92-17	Headwaters north of Great Hill, Topsfield to confluence with Ipswich River, Topsfield.	2.70	Miles	Escherichia Coli (E. Coli)	
					Fecal Coliform	
Ipswich River	MA92-02	Ipswich Mills Dam (formerly known as Sylvania Dam), Ipswich to mouth at Ipswich Bay, Ipswich.	0.39	Square Miles	Fecal Coliform	
Ipswich River	MA92-06	Source at confluence of Maple Meadow Brook and Lubbers Brook, Wilmington, to Salem Beverly Waterway Canal, Topsfield (formerly part of 1996 segment: Ipswich River MA92-01).	20.40	Miles	(Dewatering*)	
					Dissolved Oxygen	
					Mercury in Fish Tissue	



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Ipswich River	MA92-15	Salem Beverly Waterway Canal, Topsfield to Ipswich Mills Dam (formerly known as Sylvania Dam), Ipswich (formerly part of 1996 segment: Ipswich River MA92-01).	11.00	Miles	(Dewatering*)	
					Dissolved Oxygen	
					Fish Bioassessments	
					Mercury in Fish Tissue	
Kimball Brook	MA92-21	Headwaters, west of Scott Hill, Ipswich to confluence with Ipswich River, Ipswich.	2.20	Miles	Dissolved Oxygen	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
Labor in Vain Creek	MA92-22	Headwaters (excluding intermittent portion) south of Argilla Road, Ipswich to confluence with estuarine portion of Ipswich River, Ipswich.	0.03	Square Miles	Dissolved Oxygen	
					Fecal Coliform	
Lowe Pond	MA92034	Boxford.	36.00	Acres	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	
Lubbers Brook	MA92-05	Headwaters (excluding intermittent portion) Billerica to confluence with Maple Meadow Brook forming headwaters of Ipswich River, Wilmington (through former 2014 segments: Lubber Pond West MA92036 and Lubber Pond East MA92035).	5.60	Miles	(Dewatering*)	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	
Maple Meadow Brook	MA92-04	Headwaters outlet of Mill Pond, Burlington to confluence with Lubbers Brook, Wilmington.	4.20	Miles	(Dewatering*)	
					Dissolved Oxygen	
Martins Brook	MA92-08	Outlet of Martins Pond, North Reading to the confluence with the Ipswich River, North Reading.	4.60	Miles	Benthic Macroinvertebrates	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
Martins Pond	MA92038	North Reading.	89.00	Acres	(Non-Native Aquatic Plants*)	
					Algae	
					Mercury in Fish Tissue	33880
					Turbidity	
Miles River	MA92-03	Headwaters outlet Longham Reservoir, Beverly to confluence with Ipswich River, Ipswich.	8.90	Miles	Benthic Macroinvertebrates	
					Dissolved Oxygen	
Norris Brook	MA92-11	Headwaters outlet of Elginwood Pond, Peabody to confluence with Ipswich River, Danvers (Danvers/Middleton town line).	1.50	Miles	Dissolved Oxygen	
Pleasant Pond	MA92049	(Idlewood Lake) Wenham/Hamilton.	26.00	Acres	Mercury in Fish Tissue	
Salem Pond	MA92057	North Andover/Andover.	15.00	Acres	Turbidity	
Silver Lake	MA92059	Wilmington.	30.00	Acres	DDT in Fish Tissue	
					Mercury in Fish Tissue	33880
Unnamed Tributary	MA92-09	Unnamed tributary to Ipswich River, outlet of Eisenhaures Pond, North Reading to confluence with Ipswich River, North Reading.	1.40	Miles	Fish Bioassessments	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Unnamed Tributary	MA92-12	Unnamed tributary to Ipswich River, outlet of Middleton Pond, Middleton to confluence with Ipswich River, Middleton.	1.40	Miles	Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Flocculant Masses	
					Oil and Grease	
					Scum/Foam	
Unnamed Tributary	MA92-23	Unnamed tributary to Ipswich River (locally known as Greenwood Creek), headwaters, east of Jeffreys Neck Road/north of Newmarch Street, Ipswich to confluence with estuarine portion of Ipswich River, Ipswich.	0.03	Square Miles	Fecal Coliform	
Unnamed Tributary	MA92-26	Unnamed intermittent tributary to Martins Brook, from source in wetland west of the Route 93/Route 125 intersection, Wilmington to confluence with Martins Brook, Wilmington.	1.30	Miles	Chloride	
Wenham Lake	MA92073	Beverly/Wenham.	243.00	Acres	DDT in Fish Tissue	
					Mercury in Fish Tissue	33880
Islands						
Chilmark Pond	MA97-05	South of South Road including Wades Cove and Gilberts Cove, Chilmark, Martha's Vineyard.	0.31	Square Miles	Enterococcus	
					Estuarine Bioassessments	
					Fecal Coliform	
					Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	
Cuttyhunk Pond	MA97-21	Waters west of the channel connecting Cuttyhunk Pond to Cuttyhunk Harbor, Gosnold, Elizabeth Islands (formerly reported as 1996 segment:Cuttyhunk Pond MA95-26).	0.15	Square Miles	Fecal Coliform	
Edgartown Harbor	MA97-15	Waters west of Cape Poge Gut bounded by an imaginary line drawn from Chappaquiddick Point to Dock Street and northeasterly from the end of Plantingfield Way to Cape Poge Elbow (excluding Eel Pond), Edgartown, Martha's Vineyard.	3.09	Square Miles	Fecal Coliform	
Head of Hummock Pond	MA97035	Nantucket.	16.00	Acres	Harmful Algal Blooms	
Katama Bay	MA97-16	Waters south of an imaginary line from Chappaquiddick Point to Dock Street excluding Caleb Pond and Mattakeset Bay, Edgartown, Martha's Vineyard.	2.05	Square Miles	Fecal Coliform	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Lake Tashmoo	MA97-12	Waters including Drew Cove and Rhoda Pond to confluence with Vineyard Sound at channel south of Herring Creek Road, Tisbury, Martha's Vineyard.	0.41	Square Miles	Dissolved Oxygen	
					Estuarine Bioassessments	
					Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	
Long Pond	MA97-29	tidally restricted brackish water, south of Madaket Road, including White Goose Cove, Nantucket.	0.12	Square Miles	Dissolved Oxygen	64482
					Dissolved Oxygen Supersaturation	64482
					Estuarine Bioassessments	64482
					Fecal Coliform	
					Nitrogen, Total	64482
					Nutrient/Eutrophication Biological Indicators	64482
Nantucket Harbor	MA97-01	Waters south and east of an imaginary line drawn from Jetties Beach to Coatue Point (excluding Polpis Harbor and Coskata Pond), Nantucket.	7.17	Square Miles	Transparency / Clarity	64482
					Estuarine Bioassessments	36011
					Fecal Coliform	
Oak Bluffs Harbor	MA97-07	North of Lake Avenue to confluence with Nantucket Sound, Oak Bluffs, Martha's Vineyard.	0.05	Square Miles	Nitrogen, Total	36011
					(Other anthropogenic substrate alterations*)	
Polpis Harbor	MA97-26	Polpis Harbor and all adjacent coves, to an imaginary line drawn from Quaise Point to the opposite shore, Nantucket.	0.29	Square Miles	Fecal Coliform	
					Estuarine Bioassessments	36012
					Fecal Coliform	
Sengekontacket Pond	MA97-10	Between Edgartown-Vineyard Haven Road and Oak Bluffs Road, including Majors Cove, Edgartown/Oak Bluffs, Martha's Vineyard.	1.10	Square Miles	Nitrogen, Total	36012
					Dissolved Oxygen	65320
					Estuarine Bioassessments	65320
					Fecal Coliform	
					Nitrogen, Total	65320
Sesachacha Pond	MA97-02	South of Quidnet Road and north of Polpis Road, Nantucket.	0.42	Square Miles	Nutrient/Eutrophication Biological Indicators	65320
Seths Pond	MA97085	West Tisbury.	11.00	Acres	Fecal Coliform	
					Algae	
Tisbury Great Pond	MA97-18	Including Town Cove, Muddy Cove, Pear Tree Cove, Short Cove, Tiah Cove, Tississa Pond, Deep Bottom Cove, and Thumb Cove, Chilmark/West Tisbury, Martha's Vineyard.	1.10	Square Miles	Transparency / Clarity	
					Dissolved Oxygen	
					Estuarine Bioassessments	
					Fecal Coliform	
					Nitrogen, Total	
					Nutrient/Eutrophication Biological Indicators	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Vineyard Haven Harbor	MA97-09	The waters south and west of an imaginary line drawn from the tip of West Chop, Tisbury and the tip of East Chop, Oak Bluffs to the confluence of Lagoon Pond at Beach Road, Tisbury/Oak Bluffs, Martha's Vineyard.	1.54	Square Miles	Estuarine Bioassessments Fecal Coliform	
Merrimack						
Back River	MA84A-16	New Hampshire state line, Amesbury to inlet Clarks Pond, Amesbury (prior to 2010 this segment extended to confluence with Powwow River).	2.70	Miles	(Fish Passage Barrier*) Escherichia Coli (E. Coli) Sedimentation/Siltation Turbidity	
Bare Meadow Brook	MA84A-18	Headwaters, Methuen to confluence with Merrimack River, Methuen.	3.00	Miles	Escherichia Coli (E. Coli) Sedimentation/Siltation Turbidity	
Bartlett Brook	MA84A-36	New Hampshire state line, Dracut to inlet Mill Pond, Methuen.	3.70	Miles	Escherichia Coli (E. Coli)	
Beaver Brook	MA84A-11	New Hampshire state line, Dracut to confluence with Merrimack River, Lowell.	4.80	Miles	(Debris*) (Physical substrate habitat alterations*) Benthic Macroinvertebrates Escherichia Coli (E. Coli) Odor Trash Turbidity	
Beaver Brook	MA84B-02	Outlet Mill Pond, Littleton to inlet Forge Pond, Westford.	4.90	Miles	Dissolved Oxygen Fecal Coliform pH, Low Total Suspended Solids (TSS)	
Bennetts Brook	MA84B-06	Headwaters, north of Route 2, Harvard to the inlet of Spectacle Pond, Ayer/Littleton.	4.30	Miles	Escherichia Coli (E. Coli)	
Black Brook	MA84A-17	Headwaters, Chelmsford to confluence with Merrimack River, Lowell (approximately 500 feet culverted near mouth).	2.30	Miles	(Debris*) (Physical substrate habitat alterations*) Benthic Macroinvertebrates Escherichia Coli (E. Coli) Fish Bioassessments Sedimentation/Siltation Trash Turbidity	
Chadwicks Pond	MA84006	Haverhill/Boxford.	173.00	Acres	Mercury in Fish Tissue	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Cobbler Brook	MA84A-22	Headwaters, Merrimac to confluence with Merrimack River, Merrimac.	4.40	Miles	(Debris*)	
					Benthic Macroinvertebrates	
					Dissolved Oxygen	
					Lack of a coldwater assemblage	
					Temperature	
					Trash	
Creek Brook	MA84A-37	Headwaters, outlet Crystal Lake, Haverhill to confluence with Merrimack River, Haverhill.	2.30	Miles	Escherichia Coli (E. Coli)	
Crystal Lake	MA84010	Haverhill.	161.00	Acres	Mercury in Fish Tissue	
Deep Brook	MA84A-21	Headwaters east of Everett Turnpike, Tyngsborough to confluence with Merrimack River, Chelmsford.	2.90	Miles	(Habitat Assessment*)	
					Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	
					Lack of a coldwater assemblage	
					Sedimentation/Siltation	
					Temperature	
East Meadow River	MA84A-39	Headwaters, outlet Neal Pond, Haverhill to inlet Millvale Reservoir, Haverhill.	3.00	Miles	Escherichia Coli (E. Coli)	
Fish Brook	MA84A-40	Headwaters, east of Greenwood Road, Andover to confluence with Merrimack River at Fish Brook Dam (NAT ID: MA02265), Andover.	4.10	Miles	Chloride	
					Escherichia Coli (E. Coli)	
Flint Pond	MA84012	Tyngsborough.	72.00	Acres	(Brittle Naiad, Najas Minor*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Mercury in Fish Tissue	33880
Forest Lake	MA84014	Methuen.	48.00	Acres	Mercury in Fish Tissue	
Haggets Pond	MA84022	Andover.	211.00	Acres	Mercury in Fish Tissue	
Hoveys Pond	MA84025	Boxford.	36.00	Acres	Mercury in Fish Tissue	
Johnsons Pond	MA84027	Groveland/Boxford.	194.00	Acres	Dissolved Oxygen	
					Mercury in Fish Tissue	
Kenoza Lake	MA84028	Haverhill.	240.00	Acres	Mercury in Fish Tissue	
Lake Attitash	MA84002	Amesbury/Merrimac.	369.00	Acres	Harmful Algal Blooms	
					Mercury in Fish Tissue	
Lake Cochichewick	MA84008	North Andover.	575.00	Acres	Mercury in Fish Tissue	
Lake Pentucket	MA84051	Haverhill.	38.00	Acres	Mercury in Fish Tissue	
Lake Saltonstall	MA84059	Haverhill.	44.00	Acres	Mercury in Fish Tissue	
Little River	MA84A-09	New Hampshire state line, Haverhill to confluence with Merrimack River, Haverhill (approximately 200 feet culverted at mouth).	4.60	Miles	(Debris*)	
					(Habitat Assessment*)	
					Escherichia Coli (E. Coli)	
					Trash	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Long Pond	MA84032	Dracut/Tyngsborough (size indicates portion in Massachusetts).	137.00	Acres	(Curly-leaf Pondweed*)	
					Harmful Algal Blooms	
					Mercury in Fish Tissue	33880
Lowell Canals	MA84A-29	Canal system near Pawtucket Falls, Lowell.	4.90	Miles	DDT in Fish Tissue	
					Lead	
					Mercury in Fish Tissue	
					PCBs in Fish Tissue	
Massapoag Pond	MA84087	Dunstable/Groton/Tyngsborough.	111.00	Acres	(Curly-leaf Pondweed*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Dissolved Oxygen	
					Mercury in Fish Tissue	33880
Merrimack River	MA84A-01	State line at Hudson, NH/Tyngsborough, MA to Pawtucket Dam (NAT ID: MA00837), Lowell.	9.00	Miles	(Fish Passage Barrier*)	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Mercury in Fish Tissue	
Merrimack River	MA84A-02	Pawtucket Dam (NAT ID: MA00837), Lowell to Lowell Regional Wastewater Utilities (NPDES# MA0100633) outfall at Duck Island, Lowell.	3.20	Miles	(Dewatering*)	
					(Fish Passage Barrier*)	
					Escherichia Coli (E. Coli)	
					Mercury in Fish Tissue	
					Phosphorus, Total	
Merrimack River	MA84A-03	Lowell Regional Wastewater Utilities (NPDES# MA0100633) outfall at Duck Island, Lowell to Essex Dam (NAT ID: MA00234), Lawrence.	8.80	Miles	(Fish Passage Barrier*)	
					Escherichia Coli (E. Coli)	
					Mercury in Fish Tissue	
					PCBs in Fish Tissue	
					Phosphorus, Total	
Merrimack River	MA84A-04	Essex Dam (NAT ID: MA00234), Lawrence to confluence with Little River, Haverhill.	10.00	Miles	Escherichia Coli (E. Coli)	
					PCBs in Fish Tissue	
					Phosphorus, Total	
Merrimack River	MA84A-05	Confluence Little River, Haverhill to confluence Indian River, West Newbury/Amesbury.	1.83	Square Miles	Enterococcus	
					PCBs in Fish Tissue	
Merrimack River	MA84A-06	Confluence Indian River, West Newbury/Amesbury to mouth at Atlantic Ocean, Newburyport/Salisbury (includes Back River, Salisbury).	4.46	Square Miles	Enterococcus	
					Fecal Coliform	
					PCBs in Fish Tissue	
Merrimack River	MA84A-26	The Basin in the Merrimack River Estuary, Newbury/Newburyport.	0.17	Square Miles	Fecal Coliform	
Mill Pond	MA84038	[North Basin] Littleton.	30.00	Acres	Aquatic Plants (Macrophytes)	
Mill Pond	MA84081	[South Basin] Littleton.	12.00	Acres	Aquatic Plants (Macrophytes)	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Millvale Reservoir	MA84041	Haverhill.	44.00	Acres	Mercury in Fish Tissue	
Nabnasset Pond	MA84044	Westford.	134.00	Acres	(Curly-leaf Pondweed*)	
					(Non-Native Aquatic Plants*)	
					Harmful Algal Blooms	
					Mercury in Fish Tissue	33880
Newfield Pond	MA84046	Chelmsford.	77.00	Acres	(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Dissolved Oxygen	
					Mercury in Fish Tissue	33880
Peppermint Brook	MA84A-35	Headwaters, outlet of unnamed pond east of Route 38, Dracut to confluence with Beaver Brook, Dracut.	2.70	Miles	(Debris*)	
					Escherichia Coli (E. Coli)	
					Trash	
Plum Island River	MA84A-27	From Chaces Island, Merrimack River Estuary, to the "high sandy" sand bar just north of the confluence with Pine Island Creek, Newbury (formerly part of 2000 segment: Plum Island River MA84A-23).	0.13	Square Miles	Fecal Coliform	
Powwow River	MA84A-08	Tidal portion, just downstream of Main Street, Amesbury to confluence with Merrimack River, Amesbury.	0.06	Square Miles	Escherichia Coli (E. Coli)	
Powwow River	MA84A-25	Outlet of Lake Gardner, Amesbury to tidal portion, just downstream of Main Street, Amesbury (formerly part of 2000 segment: Powwow River MA84A-07).	0.60	Miles	(Fish Passage Barrier*)	
					Escherichia Coli (E. Coli)	
Powwow River	MA84A-28	Outlet Tuxbury Pond, Amesbury to New Hampshire state line, Amesbury (A/PWS/ORW only applies to upper approximate 1 mile reach; to the Amesbury DPW Water Division intake (Source ID 3007000-01S) (formerly part of 2000 segment: Powwow River MA84A-07).	2.90	Miles	(Fish Passage Barrier*)	
					Fecal Coliform	
					Total Suspended Solids (TSS)	
					Turbidity	
Richardson Brook	MA84A-12	Headwaters, Dracut (excluding intermittent portion) to confluence with Merrimack River, Dracut.	1.90	Miles	Escherichia Coli (E. Coli)	
South Branch Souhegan River	MA84A-31	Headwaters, outlet Watatic Pond, Ashburnham to New Hampshire state line, Ashby.	3.00	Miles	Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	
					Temperature	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Spectacle Pond	MA84089	Littleton/Ayer.	79.00	Acres	(Curly-leaf Pondweed*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					(Water Chestnut*)	
					Dissolved Oxygen	
Spicket River	MA84A-10	New Hampshire state line, Methuen to confluence with Merrimack River, Lawrence.	5.80	Miles	(Debris*)	
					(Fish Passage Barrier*)	
					(Physical substrate habitat alterations*)	
					Benthic Macroinvertebrates	
					Copper	
					DDT in Fish Tissue	
					Escherichia Coli (E. Coli)	
					Mercury in Fish Tissue	
					Nutrients	
					Trash	
Stevens Pond	MA84064	North Andover.	23.00	Acres	Harmful Algal Blooms	
Stony Brook	MA84B-03	Headwaters outlet Forge Pond, Westford to Brookside Road, Westford.	6.50	Miles	Mercury in Fish Tissue	
					Benthic Macroinvertebrates	
					Fecal Coliform	
Stony Brook	MA84B-04	Brookside Road, Westford to confluence with Merrimack River, Chelmsford.	3.40	Miles	Turbidity	
					(Dewatering*)	
					Benthic Macroinvertebrates	
Tadmuck Brook	MA84B-07	Headwaters south of Main Street, Westford to confluence with Stony Brook, Westford.	1.40	Miles	Escherichia Coli (E. Coli)	
Trout Brook	MA84A-13	Headwaters, Dracut to confluence with Richardson Brook, Dracut.	2.60	Miles	Escherichia Coli (E. Coli)	
Trull Brook	MA84A-14	Source, Tewksbury (excluding intermittent portion) to confluence with Merrimack River, Tewksbury.	2.10	Miles	Escherichia Coli (E. Coli)	
Unnamed Tributary	MA84A-30	Unnamed tributary to Powwow River locally considered portion of Back River from outlet of Clarks Pond, Amesbury to confluence with Powwow River, Amesbury (formerly part of 2008 segment: Back River MA84A-16).	0.003	Square Miles	Escherichia Coli (E. Coli)	
Unnamed Tributary	MA84B-01	(Locally known as Reedy Meadow Brook) Headwaters, outlet of small unnamed impoundment upstream of Bruce Street, Littleton to inlet Mill Pond, Littleton.	1.50	Miles	Ambient Bioassays - Chronic Aquatic Toxicity	
					Fecal Coliform	
Ward Pond	MA84096	Ashburnham (formerly reported as 1996 segment: Ward Pond MA35094).	54.00	Acres	Dissolved Oxygen	



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Millers						
Beaver Brook	MA35-09	Fernald School discharge, Templeton to confluence with Millers River, Royalston.	3.40	Miles	PCBs in Fish Tissue	
Beaver Brook	MA35-28	Headwaters, confluence of Kendall and Chickering brooks, Phillipston to the Fernald School (MA0102156) discharge, Templeton.	2.30	Miles	PCBs in Fish Tissue	
Boyce Brook	MA35-17	NH State Line, Royalston to confluence with East Branch Tully River, Royalston.	3.20	Miles	PCBs in Fish Tissue	
East Branch Tully River	MA35-29	From the outlet of Tully Lake, Royalston to confluence with the West Branch Tully River forming headwaters Tully River, Orange/Athol (formerly reported as a portion of MA35-12).	3.50	Miles	PCBs in Fish Tissue	
East Branch Tully River	MA35-30	Confluence of Tully Brook and Falls Brook in Royalston State Forest, Royalston through Long Pond to inlet Tully Lake, Royalston (formerly reported as a portion of MA35-12).	5.40	Miles	PCBs in Fish Tissue	
Ellinwood Brook	MA35-22	Headwaters, outlet unnamed pond east of Woodlawn Road, Athol to inlet of White Pond, Athol.	3.60	Miles	PCBs in Fish Tissue	
Gales Pond	MA35024	Warwick.	12.00	Acres	Mercury in Fish Tissue	33880
					Turbidity	
Jacks Brook	MA35-31	Headwaters south of Orange Road, Northfield to mouth at confluence with Keyup Brook, Erving.	2.70	Miles	PCBs in Fish Tissue	
Keyup Brook	MA35-16	Headwaters Great Swamp Northfield State Forest, Northfield, to confluence with Millers River, Erving.	5.00	Miles	Escherichia Coli (E. Coli)	
					PCBs in Fish Tissue	
Lake Monomonac	MA35047	Massachusetts portion only. Winchendon/Rindge, N.H.	186.00	Acres	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	
Lake Rohunta	MA35070	(Middle Basin) Athol/Orange/New Salem.	209.00	Acres	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Mercury in Fish Tissue	33880
Lake Rohunta	MA35107	(South Basin) New Salem.	42.00	Acres	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Mercury in Fish Tissue	33880
Laurel Lake	MA35035	Erving/Warwick.	44.00	Acres	Dissolved Oxygen	
Lawrence Brook	MA35-13	New Hampshire state line, Royalston through Doane Falls to confluence with East Branch Tully River at inlet Tully Lake, Royalston.	7.10	Miles	PCBs in Fish Tissue	
Lyons Brook	MA35-19	Outlet of Ruggles Pond, Wendell to confluence with Millers River, Montague/Wendell.	2.10	Miles	PCBs in Fish Tissue	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Mahoney Brook	MA35-27	Headwaters, east of Willis Road and Ray Hill, Gardner to Mahoney Pond Dam (MA02319), Gardner.	3.00	Miles	PCBs in Fish Tissue	
Millers River	MA35-01	Outlet of Whitney Pond, Winchendon to Winchendon WWTP, Winchendon.	3.30	Miles	Ambient Bioassays - Chronic Aquatic Toxicity	
					Lack of a coldwater assemblage	
					Temperature	
Millers River	MA35-02	Winchendon WWTP, Winchendon to confluence with Otter River, Winchendon.	5.60	Miles	PCBs in Fish Tissue	
Millers River	MA35-03	Confluence with Otter River, Winchendon to South Royalston USGS Gage, Royalston.	3.50	Miles	PCBs in Fish Tissue	
Millers River	MA35-04	South Royalston USGS Gage, Royalston to Erving Center WWTP (formerly known as Erving Paper Company), Erving.	18.50	Miles	PCBs in Fish Tissue	
Millers River	MA35-05	Erving Center WWTP (formerly known as Erving Paper Company), Erving to confluence with Connecticut River, Erving/Montague.	9.20	Miles	PCBs in Fish Tissue	
Millers River	MA35-20	Outlet of Sunset Lake, Ashburnham to inlet of Whitney Pond, Winchendon.	6.40	Miles	Lack of a coldwater assemblage	
Mormon Hollow Brook	MA35-15	Headwaters just north of Montague Road, Wendell to confluence with Millers River, Wendell.	3.80	Miles	PCBs in Fish Tissue	
North Branch Millers River	MA35-21	Outlet of Lake Mononomac, Winchendon to inlet of Whitney Pond, Winchendon.	2.00	Miles	Mercury in Fish Tissue	
North Pond Brook	MA35-23	Headwaters, from northern outlet of Lake Mattawa, Orange to confluence with Millers River, Orange.	2.10	Miles	PCBs in Fish Tissue	
Otter River	MA35-06	Source, Hubbardston (north of Pitcherville Road) to Gardner WWTP, Gardner/Templeton.	4.30	Miles	Ambient Bioassays - Chronic Aquatic Toxicity	
Otter River	MA35-08	Seaman Paper Dam, Templeton to confluence with Millers River, Winchendon.	5.50	Miles	Dissolved Oxygen	
Stockwell Brook	MA35-25	Headwaters east of Norcross Road, Royalston to mouth at Beaver Pond inlet, Royalston.	1.30	Miles	PCBs in Fish Tissue	
Tully Lake	MA35111	Royalston/Athol.	214.00	Acres	PCBs in Fish Tissue	
Tully River	MA35-14	Confluence East and West Branches Tully River, Orange/Athol to confluence with Millers River, Athol.	1.60	Miles	Harmful Algal Blooms	
Unnamed Tributary	MA35-26	Unnamed tributary to Millers River from the outlet of Lake Wallace to the mouth at confluence with Millers River, Ashburnham (excluding Lake Watatic segment MA35095 and Lower Naukeag Lake segment MA35041).	2.10	Miles	Copper	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
West Branch Tully River	MA35-11	Outlet Sheomet Lake, Warwick to confluence with East Branch Tully River forming headwaters Tully River, Orange/Athol.	6.60	Miles	PCBs in Fish Tissue Temperature	
West Gulf Brook	MA35-24	From headwaters west of Paine Swamp Road, Athol to confluence with Millers River, Athol.	0.80	Miles	PCBs in Fish Tissue	
Whetstone Brook	MA35-18	Headwaters northeast of Orcutt Hill near New Salem Rd, Wendell to confluence with Millers River, Wendell.	4.90	Miles	PCBs in Fish Tissue	
Whitney Pond	MA35101	Winchendon.	97.00	Acres	(Aquatic Plants (Macrophytes)*) Mercury in Fish Tissue Turbidity	 4145
Mount Hope Bay (Shore)						
Cole River	MA61-04	Route 6, Swansea to the mouth at Mount Hope Bay at old railway grade, Swansea.	0.35	Square Miles	Chlorophyll-a Dissolved Oxygen Fecal Coliform Nitrogen, Total	 38907
Lee River	MA61-01	From confluence with Lewin Brook, Swansea to Route 6, Swansea/Somerset.	0.02	Square Miles	Fecal Coliform Nutrient/Eutrophication Biological Indicators	38905
Lee River	MA61-02	Route 6, Swansea/Somerset to mouth at Mount Hope Bay, Swansea/Somerset.	0.51	Square Miles	Chlorophyll-a Dissolved Oxygen Fecal Coliform Nitrogen, Total	 38906
Lewin Brook	MA61-09	Headwaters, west of Sharps Lot Road, Swansea to the inlet of the unnamed impoundment north of Lewin Lane, Swansea (impoundment upstream of dam, NAT ID# MA03247).	1.90	Miles	Escherichia Coli (E. Coli)	
Mount Hope Bay	MA61-06	The Massachusetts portion just upstream of the Braga Bridge, Fall River/Somerset to the state border Fall River, MA/Tiverton, RI to the line from Brayton Point Somerset to MA/RI border approximately 3/4 of a mile due east of Spar Island, RI.	2.32	Square Miles	Chlorophyll-a Dissolved Oxygen Enterococcus Fecal Coliform Fish Bioassessments Nitrogen, Total	 38908 38908
Mount Hope Bay	MA61-07	the Massachusetts portion from mouth of Cole River (at old railway grade), Swansea to state border Swansea, MA/Warren, RI to the line from Brayton Point, Somerset to MA/RI border approximately 3/4 of a mile due east of Spar Island, RI to the line between Bay Point, Swansea and Brayton Point, Somerset (the mouth of the Lee River).	1.84	Square Miles	Chlorophyll-a Dissolved Oxygen Enterococcus Fecal Coliform Fish Bioassessments Nitrogen, Total	 38909 38909



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Quequechan River	MA61-05	Outlet South Watuppa Pond, Fall River to confluence with Mt. Hope Bay at mouth of Taunton River (just upstream of the Braga Bridge), Fall River.	2.40	Miles	(Debris*)	
					(Habitat Assessment*)	
					Algae	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	
					Nutrient/Eutrophication Biological Indicators	
					Trash	
Narragansett Bay (Shore)						
Bliss Brook	MA53-19	Headwaters north of Tremont Street, Rehoboth to mouth at confluence with West Branch Palmer River, Rehoboth.	2.40	Miles	Escherichia Coli (E. Coli)	
Clear Run Brook	MA53-13	Headwaters, outlet unnamed pond northwest of Miller Street, Seekonk to confluence with Palmer River, Rehoboth.	1.60	Miles	Dissolved Oxygen	
					Escherichia Coli (E. Coli)	35097
					Fecal Coliform	35097
Palmer River	MA53-22	Headwaters, confluence of the East and West branches of the Palmer River, Rehoboth to the inlet of Shad Factory Pond, Rehoboth (formerly part of 2014 segment: Palmer River MA53-04).	4.80	Miles	Escherichia Coli (E. Coli)	35086
					Fecal Coliform	35086
					Temperature	
Runnins River	MA53-01	Route 44, Seekonk to Mobile Dam, Seekonk, MA/East Providence, RI (through Burrs Pond formerly segment MA53001).	3.70	Miles	Benthic Macroinvertebrates	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	38903
					Fecal Coliform	38903
					Mercury in Fish Tissue	33880
	Nutrient/Eutrophication Biological Indicators					
Runnins River	MA53-20	Headwaters just north of Walnut Street, Rehoboth to Route 44, Seekonk.	3.50	Miles	Escherichia Coli (E. Coli)	
Shad Factory Pond	MA53005	Rehoboth (formerly part of 2014 segment: Palmer River MA53-04).	31.00	Acres	(Dewatering*)	
					Fecal Coliform	35086
					Nutrient/Eutrophication Biological Indicators	
Unnamed Tributary	MA53-21	Headwaters east of Agawam Court, Seekonk to inlet of unnamed pond south of Sagamore Road, Seekonk.	0.60	Miles	Escherichia Coli (E. Coli)	
Nashua						
Asnebumskit Brook	MA81-56	From outlet Eagle Lake, Holden to mouth at confluence with the Quinapoxet River, Holden.	2.90	Miles	Ambient Bioassays - Chronic Aquatic Toxicity	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Baker Brook	MA81-62	Headwaters, confluence of Pearl Hill and Falulah brooks, Fitchburg to mouth at confluence with North Nashua River, Fitchburg.	2.50	Miles	Escherichia Coli (E. Coli)	
Catacoonamug Brook	MA81-16	Outlet Lake Shirley, Lunenburg to mouth at confluence with Nashua River (backwater area), Shirley.	2.70	Miles	Dissolved Oxygen	
					Lack of a coldwater assemblage	
					Temperature	
Catacoonamug Brook	MA81-74	Headwaters, northwest of Chestnut Street, Lunenburg to inlet Lake Shirley, Harvard.	4.50	Miles	Escherichia Coli (E. Coli)	
Fall Brook	MA81-39	From outlet Lake Samoset, Leominster to mouth at confluence with the North Nashua River, Leominster (formerly part of 2008 segment: Fall Brook MA81-14).	3.00	Miles	Escherichia Coli (E. Coli)	
					Temperature	
Fall Brook Reservoir	MA81038	Leominster.	88.00	Acres	Mercury in Fish Tissue	
Falulah Brook	MA81-100	From the outlet of Lovell Reservoir at Lovell Reservoir Dam (NATID#: MA00872), Fitchburg to mouth at confluence with Pearl Hill Brook, forming headwaters Baker Brook, Fitchburg (formerly part of 2016 segment: Falulah Brook MA81-63).	4.00	Miles	Escherichia Coli (E. Coli)	
Falulah Brook	MA81-99	Headwaters near Ringe Road, Ashby to inlet Lovell Reservoir, Fitchburg (formerly part of 2016 segment: Falulah Brook MA81-63).	2.00	Miles	Escherichia Coli (E. Coli)	
Fort Pond	MA81046	Lancaster.	76.00	Acres	Dissolved Oxygen	
Gates Brook	MA81-24	Headwaters west of Prospect Street, West Boylston to mouth at inlet Wachusett Reservoir (Gates Cove), West Boylston.	3.40	Miles	Chloride	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
Grove Pond	MA81053	Ayer.	68.00	Acres	(Curly-leaf Pondweed*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Arsenic	
					DEHP (Di-sec-octyl phthalate)	
					Mercury in Fish Tissue	
					Polycyclic Aromatic Hydrocarbons (PAHs) (Aquatic Ecosystems)	
					Sediment Bioassay [Chronic Toxicity Freshwater]	
James Brook	MA81-20	Headwaters, Groton to mouth at mouth at confluence with Nashua River, Ayer/Groton.	3.90	Miles	Dissolved Oxygen	
					Escherichia Coli (E. Coli)	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Lake Shirley	MA81122	Lunenburg/Shirley.	360.00	Acres	(Brittle Naiad, Najas Minor*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Dissolved Oxygen	
					Harmful Algal Blooms	
					Mercury in Fish Tissue	42399
					Turbidity	
Malagasco Brook	MA81-29	Headwaters southwest of Apron Hill, Boylston through Pine Swamp to mouth at inlet Wachusett Reservoir (South Bay), Boylston.	2.40	Miles	Benthic Macroinvertebrates	
Malden Brook	MA81-27	Headwaters northeast of Lee Street, West Boylston to mouth at inlet Wachusett Reservoir (Thomas Basin), West Boylston.	1.90	Miles	Temperature	
Mirror Lake	MA81085	Harvard.	28.00	Acres	(Curly-leaf Pondweed*)	
					Mercury in Fish Tissue	
Monoosnuc Brook	MA81-13	Headwaters, outlet Simonds Pond, Leominster to mouth at confluence with North Nashua River, Leominster (through former 2008 segments: Pierce Pond MA81101 and Rockwell Pond MA81112) (prior to 2002 this segment was only lower portion (1.5 miles) of brook).	6.10	Miles	(Non-Native Aquatic Plants*)	
					Escherichia Coli (E. Coli)	
Muddy Brook	MA81-28	Headwaters west of Shrewsbury Street, West Boylston to mouth at inlet Wachusett Reservoir (South Bay), West Boylston.	0.80	Miles	Benthic Macroinvertebrates	
Mulpus Brook	MA81-36	Headwaters, north of Howard Street, Lunenburg to the inlet of Hickory Hills Lake, Lunenburg (formerly part of 2008 segment: Mulpus Brook MA81-22).	3.80	Miles	Temperature	
Mulpus Brook	MA81-37	From outlet Hickory Hills Lake, Lunenburg to mouth at confluence with the Nashua River, Shirley (formerly part of 2008 segment: Mulpus Brook MA81-22).	6.30	Miles	Lack of a coldwater assemblage	
					Temperature	
Nashua River	MA81-05	From confluence of North Nashua River, Lancaster to confluence of Squannacook River, Shirley/Groton/Ayer.	14.20	Miles	(Water Chestnut*)	
					Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	
					Phosphorus, Total	
					Sediment Bioassay [Acute Toxicity Freshwater]	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Nashua River	MA81-06	From confluence of Squannacook River, Shirley/Groton/Ayer to Pepperell Dam (NATID: MA00373), Pepperell (through former 2008 segment: Pepperell Pond MA81167).	9.10	Miles	(Curly-leaf Pondweed*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					(Water Chestnut*)	
					Benthic Macroinvertebrates	
					Mercury in Fish Tissue	
					Nutrient/Eutrophication Biological Indicators	
Nashua River	MA81-07	From Pepperell Dam (NATID: MA00373), Pepperell to New Hampshire state line, Pepperell/Dunstable.	3.70	Miles	(Water Chestnut*)	
					Benthic Macroinvertebrates	
Nashua River	MA81-09	("South Branch" Nashua River) From Clinton WWTP discharge (NPDES: MA0100404), Clinton to confluence with North Nashua River, Lancaster.	1.80	Miles	Escherichia Coli (E. Coli)	
					pH, Low	
Nissitissit River	MA81-21	New Hampshire state line, Pepperell to mouth at confluence with Nashua River, Pepperell.	4.60	Miles	Lack of a coldwater assemblage	
					Temperature	
Nonacoicus Brook	MA81-17	Outlet Plow Shop Pond, Ayer to mouth at confluence with Nashua River, Ayer/Shirley.	1.40	Miles	Dissolved Oxygen	
North Nashua River	MA81-01	Headwaters, outlet Snows Millpond, Fitchburg to Fitchburg Paper Company Dam #1 (NATID: MA00877), Fitchburg.	1.70	Miles	Escherichia Coli (E. Coli)	
North Nashua River	MA81-02	From Fitchburg Paper Company Dam #1 (NATID: MA00877), Fitchburg to Fitchburg East WWTP outfall (NPDES: MA0100986), Leominster.	6.90	Miles	Ambient Bioassays - Chronic Aquatic Toxicity	
					Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	
					Fish Bioassessments	
					Lead	
North Nashua River	MA81-03	From Fitchburg East WWTP outfall (NPDES: MA0100986), Leominster to Leominster WWTP outfall (NPDES: MA0100617), Leominster.	1.60	Miles	Escherichia Coli (E. Coli)	
North Nashua River	MA81-04	From Leominster WWTP outfall (NPDES: MA0100617), Leominster to mouth at confluence with Nashua River ("South Branch" Nashua River), Lancaster.	10.40	Miles	Escherichia Coli (E. Coli)	
					Odor	
Partridge Pond	MA81098	Westminster.	25.00	Acres	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Turbidity	
Pearl Hill Brook	MA81-80	Headwaters, outlet Wright Ponds, Ashby to mouth at confluence with Squannacook River, Townsend.	6.70	Miles	Enterococcus	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Phillips Brook	MA81-12	Headwaters, outlet Winnekeag Lake, Ashburnham to Westminster Street (Route 2A/31), Fitchburg (segment includes McTaggarts Pond and unnamed tributary to North Nashua River) (qualifiers apply to 0.0 to 1.0 mile of river per 2007 SWQS, NOTE: CSO eliminated in 2006).	8.40	Miles	Temperature	
Plow Shop Pond	MA81103	Ayer.	29.00	Acres	(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Arsenic	
					Chromium, Total	
					Mercury in Fish Tissue	
					Polycyclic Aromatic Hydrocarbons (PAHs) (Aquatic Ecosystems)	
					Sediment Bioassay [Chronic Toxicity Freshwater]	
Quinapoxet River	MA81-32	Headwaters, outlet Quinapoxet Reservoir, Holden to mouth at inlet Wachusett Reservoir (Thomas Basin), West Boylston.	7.90	Miles	(Dewatering*) Temperature	
Scarletts Brook	MA81-25	Headwaters west of West Boylston Street (Route 12), West Boylston to mouth at confluence with Gates Brook, West Boylston (stream entirely intermittent; per SARIS and the 1983 Worcester North USGS topographic quadrangle).	0.50	Miles	Chloride	
Smith Brook	MA81-90	Headwaters, outlet Meetinghouse Pond, Westminster to mouth at inlet Wyman Pond, Westminster.	1.60	Miles	Temperature	
Spectacle Pond	MA81132	Lancaster.	61.00	Acres	Dissolved Oxygen	
Squannacook River	MA81-18	Headwaters, confluence Mason and Willard brooks, Townsend to Hollingsworth and Vose Dam (NATID: MA00443), Groton/Shirley (through former 2008 segment: Harbor Pond MA81054).	12.60	Miles	Lack of a coldwater assemblage	
					pH, Low	
					Temperature	
Still River	MA81-60	Headwaters, Lancaster to Route 117, Bolton (formerly part of 2008 segment: Still River MA81-15).	0.60	Miles	Dissolved Oxygen	
					Escherichia Coli (E. Coli)	
Stillwater River	MA81-31	Headwaters, confluence of Justice and Keyes brooks, Princeton/Sterling to mouth at inlet of Wachusett Reservoir (Stillwater Basin), Sterling.	6.70	Miles	Escherichia Coli (E. Coli)	
					Temperature	
Trout Brook	MA81-26	Headwaters, outlet Cournoyer Pond, Holden to mouth at confluence with Quinepoxet River, Holden.	1.90	Miles	Temperature	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Unnamed Tributary	MA81-35	Unnamed tributary to Quinepoxet River locally considered "Lower Chaffin Brook", headwaters outlet Unionville Pond, Holden to mouth at confluence with Quinepoxet River, Holden.	0.50	Miles	Benthic Macroinvertebrates	
					Dissolved Oxygen	
Unnamed Tributary	MA81-49	Unnamed tributary to Wachusett Reservoir, headwaters, outlet Carrolls Pond, West Boylston to mouth at inlet Wachusett Reservoir, West Boylston.	0.80	Miles	Chloride	
Unnamed Tributary	MA81-54	Unnamed tributary to Wachusett Reservoir, headwaters, west of Route 140, West Boylston to mouth at inlet Wachusett Reservoir (Stillwater Basin), West Boylston.	0.80	Miles	Chloride	
Wachusett Lake	MA81146	Westminster/Princeton.	129.00	Acres	Mercury in Fish Tissue	
Washacum Brook	MA81-47	Headwaters, outlet West Waushacum Pond, Sterling to mouth at inlet Wachusett Reservoir (Stillwater Basin), West Boylston.	1.80	Miles	Dissolved Oxygen	
Wekepeke Brook	MA81-72	Headwaters, outlet Heywood Reservoir, Sterling to mouth at confluence with North Nashua River, Lancaster (through former 2014 segments: Bartlett Pond MA81008 and Unnamed Tributary MA81-61).	5.80	Miles	Escherichia Coli (E. Coli)	
					Temperature	
Whitman River	MA81-11	Headwaters, outlet Lake Wampanoag, Ashburnham to mouth at inlet Snobs Millpond, Fitchburg/Westminster (excluding the approximately 1.2 miles through Whitmanville Reservoir segment MA81109 and the approximately 0.8 miles through Crocker Pond segment MA81025).	6.30	Miles	(Non-Native Aquatic Plants*)	
					Lead	
					Temperature	
Willard Brook	MA81-79	Headwaters, outlet Fitchburg Reservoir, Ashby to mouth at confluence with Mason Brook forming headwaters Squannacook River, Townsend (excluding the approximate 0.3 mile through Ashby Reservoir, segment MA81001).	6.20	Miles	Enterococcus	
North Coastal						
Bass River	MA93-07	Headwaters, perennial portion west of Wenham Lake, Beverly to the outlet of "lower Shoe Pond" north of Route 62, Beverly (through former 2006 segment: Shoe Pond MA93068) (portions culverted).	2.10	Miles	(Fish Passage Barrier*)	
					Turbidity	
Beaver Brook	MA93-37	Headwaters, perennial portion west of Route 95, Danvers to mouth at inlet Mill Pond, Danvers.	2.70	Miles	Dissolved Oxygen	
					Escherichia Coli (E. Coli)	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Beaverdam Brook	MA93-30	Headwaters west of Main Street, Lynnfield to confluence with Saugus River (Reedy Meadow), Lynnfield.	2.50	Miles	Dissolved Oxygen	
					Escherichia Coli (E. Coli)	50120
					Fecal Coliform	50120
Beverly Harbor	MA93-20	From the mouth of the Danvers River, Salem/Beverly to an imaginary line from Juniper Point, Salem to Hospital Point, Beverly.	1.02	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	50122
Cape Pond	MA93011	Rockport.	42.00	Acres	Turbidity	
Cat Brook	MA93-29	Headwaters, perennial portion east of Route 128, Manchester to the edge of the designated shellfishing beds east of Powder House Lane, Manchester.	1.50	Miles	pH, Low	
					Temperature	
Crane Brook	MA93-02	Headwaters, perennial portion east of Route 95, Danvers to mouth at inlet Mill Pond, Danvers.	1.80	Miles	Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	50120
					Fecal Coliform	50120
Crane River	MA93-38	Headwaters, outlet Mill Pond, Danvers to outlet of the pump house sluiceway, Purchase Street, Danvers (through a portion of former 1998 segment: Crane River MA93-03).	0.30	Miles	(Fish Passage Barrier*)	
					Escherichia Coli (E. Coli)	
Flax Pond	MA93023	Lynn.	55.00	Acres	(Curly-leaf Pondweed*)	
					(Non-Native Aquatic Plants*)	
					Algae	
					Chlordane in Fish Tissue	
					DDT in Fish Tissue	
					Turbidity	
Floating Bridge Pond	MA93024	Lynn.	12.00	Acres	Algae	
					Phosphorus, Total	
					Turbidity	
Forest River	MA93-10	From saltwater wetlands upstream of Loring Avenue, Salem to mouth at confluence with Salem Harbor, Salem.	0.03	Square Miles	Dissolved Oxygen Supersaturation	
Foster Pond	MA93026	Swampscott.	5.00	Acres	DDT in Fish Tissue	
Gloucester Harbor	MA93-18	The waters landward of an imaginary line drawn between Mussel Point, Gloucester and the tip of the Dog Bar Breakwater, Gloucester excluding the Annisquam River.	2.32	Square Miles	Combined Biota/Habitat Bioassessments	
					Dissolved Oxygen	
					Enterococcus	50122
					Fecal Coliform	50122



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Goldthwait Brook	MA93-05	Headwaters, outlet Cedar Pond, Peabody to mouth at confluence with Proctor Brook, Peabody (portions culverted).	3.30	Miles	(Alteration in stream-side or littoral vegetative covers*)	
					(Dewatering*)	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	50120
					Fecal Coliform	50120
					Phosphorus, Total	
Hawkes Brook	MA93-33	From outlet of Hawkes Pond, Saugus to mouth at confluence with Saugus River, Saugus.	1.10	Miles	(Debris*)	
					Benthic Macroinvertebrates	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	50120
					Fecal Coliform	50120
					Trash	
Hawkes Pond	MA93032	Lynnfield/Saugus.	65.00	Acres	Turbidity	
Lake Quannapowitt	MA93060	Wakefield.	246.00	Acres	(Curly-leaf Pondweed*)	
					(Fish Passage Barrier*)	
					DDT in Fish Tissue	
					Harmful Algal Blooms	
					Turbidity	
Lily Pond	MA93039	Gloucester.	24.00	Acres	Algae	
					Nutrient/Eutrophication Biological Indicators	
					Turbidity	
					Estuarine Bioassessments	
Marblehead Harbor	MA93-22	The waters landward of an imaginary line drawn northwesterly from the northern tip of Marblehead Neck, Marblehead to Fort Sewall, Marblehead.	0.57	Square Miles	Fecal Coliform	50121
Mill River	MA93-31	Headwaters in wetlands north of Salem Street, Wakefield to mouth at confluence with Saugus River, Wakefield.	2.00	Miles	Dissolved Oxygen	
					Escherichia Coli (E. Coli)	50120
					Fecal Coliform	50120
					Turbidity	
North River	MA93-42	Downstream of Route 114 bridge (Proctor Brook becomes North River at this bridge), Salem to mouth at confluence with Danvers River and Beverly Harbor, Salem (formerly part of 1998 segment: North River MA93-06).	0.15	Square Miles	Ammonia, Un-ionized	
					Dissolved Oxygen Supersaturation	
					Fecal Coliform	50121



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Pillings Pond	MA93056	Lynnfield.	90.00	Acres	Algae	
					Chlorophyll-a	
					Dissolved Oxygen	
					Dissolved Oxygen Supersaturation	
					Phosphorus, Total	
					Transparency / Clarity	
Proctor Brook	MA93-39	Headwaters, outlet small pond in wetland north of Downing Road, Peabody to Grove/Goodhue Street bridge, Salem (formerly part of 1998 segment: North River MA93-06) (interrupted urban).	2.90	Miles	(Debris*)	
					Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	50120
					Fecal Coliform	50120
					Nitrogen, Total	
					Sedimentation/Siltation	
					Phosphorus, Total	
					Trash	
Proctor Brook	MA93-40	From Grove/Goodhue Street bridge, Salem to mouth at Route 114 culvert, Salem (formerly part of 1998 segment: North River MA93-06).	0.01	Square Miles	(Debris*)	
					Fecal Coliform	50123
					Flocculant Masses	
					Odor	
					Oil and Grease	
					Scum/Foam	
Salem Harbor	MA93-54	Waters landward of an imaginary line from Naugus Head, Marblehead to the northwest point of Bakers Island, Salem to Hospital Point, Beverly to Juniper Point, Salem (excluding Forest River) (area includes former 2010 segment: Salem Harbor MA93-21 and part of former 2010 segment: Salem Sound MA93-25 [waterbody code 93907]).	4.91	Square Miles	Enterococcus	50122
					Estuarine Bioassessments	
					Fecal Coliform	50122
Salem Sound	MA93-56	Southern portion of Salem Sound, waters landward of and within imaginary lines from Fort Sewall, Marblehead to the Marblehead Lighthouse on Marblehead Neck, Marblehead to the northwest point of Bakers Island, Salem to Naugus Head, Marblehead (formerly part of 2010 segment: Salem Sound MA93-25).	2.55	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	50121



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Saugus River	MA93-34	Headwaters, outlet Lake Quannapowitt, Wakefield (thru Reedy Meadow) to Lynn Water & Sewer Commission diversion canal impoundment dam (Saugus River Dam, NAT ID: MA02276), Wakefield/Lynnfield (canal diverts to Hawkes Pond) (formerly part of 1998 segment: Saugus River MA93-13).	3.10	Miles	(Fish Passage Barrier*)	
					(Physical substrate habitat alterations*)	
					Algae	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	50120
					Fecal Coliform	50120
					Phosphorus, Total	
Saugus River	MA93-35	From the Lynn Water & Sewer Commission diversion canal impoundment dam (Saugus River Dam, NAT ID: MA02276), Wakefield/Lynnfield to Saugus Iron Works, Bridge Street, Saugus (formerly part of 1998 segment: Saugus River MA93-13).	5.40	Miles	Turbidity	
					(Alteration in stream-side or littoral vegetative covers*)	
					(Dewatering*)	
					(Fish Passage Barrier*)	
					Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	50120
Saugus River	MA93-43	From Saugus Iron Works, Bridge Street, Saugus to Lincoln Avenue/Boston Street, Saugus/Lynn (formerly part of 2006 segment: Saugus River MA93-14).	0.04	Square Miles	Fecal Coliform	50122
					Oil and Grease	
					Temperature	
					(Flow Regime Modification*)	
Saugus River	MA93-44	From Lincoln Avenue/Boston Street, Saugus/Lynn to mouth (east of Route 1A) at Lynn Harbor, Lynn/Revere (formerly part of 2006 segment: Saugus River MA93-14).	0.37	Square Miles	Enterococcus	50122
					Fecal Coliform	50122
					Oil and Grease	
					Temperature	
Sluice Pond	MA93071	Lynn.	42.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
Strangman Pond	MA93076	Gloucester.	3.00	Acres	Dissolved Oxygen	
					Algae	
					Aquatic Plants (Macrophytes)	
Unnamed Tributary	MA93-51	Unnamed tributary locally known as "Town Line Brook", from Route 99, Malden to mouth at confluence with Pines River, Revere.	0.02	Square Miles	Turbidity	
					(Alteration in stream-side or littoral vegetative covers*)	
					(Debris*)	
					(Flow Regime Modification*)	
					(Physical substrate habitat alterations*)	
					Fecal Coliform	50123
					Odor	
					Trash	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Unnamed Tributary	MA93-58	Unnamed tributary to Beverly Cove, perennial portion, Route 22, Beverly to saltwater wetlands south of Route 127, Beverly.	2.10	Miles	Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	
Unnamed Tributary	MA93-59	Unnamed tributary to Chubb Creek, headwaters west of Hale Street, Beverly to mouth at confluence with Chubb Creek east of Route 127, Beverly.	0.80	Miles	Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	
Upper Banjo Pond	MA93080	Gloucester.	11.00	Acres	Aquatic Plants (Macrophytes)	
					Turbidity	
Walden Pond	MA93084	Lynn/Saugus/Lynnfield.	222.00	Acres	Mercury in Fish Tissue	
West Pond	MA93089	Gloucester.	7.00	Acres	Algae	
					Chlorophyll-a	
					Phosphorus, Total	
					Transparency / Clarity	
Parker						
Baldpate Pond	MA91001	Boxford.	60.00	Acres	(Curly-leaf Pondweed*)	
					(Fanwort*)	
					Dissolved Oxygen	
					Mercury in Fish Tissue	
Eagle Hill River	MA91-06	Headwaters north of Town Hill, east of Town Farm Road, Ipswich to the mouth at Plum Island Sound, Ipswich.	0.35	Square Miles	Fecal Coliform	
Egypt River	MA91-14	From tidally influenced area approximately 600 feet downstream from High Street (Route 1A), Ipswich to mouth at confluence with Rowley River, Rowley/Ipswich.	0.04	Square Miles	Fecal Coliform	
Little River	MA91-11	Scotland Road/Parker Street, Newbury/Newburyport to mouth at confluence with Parker River, Newbury.	0.09	Square Miles	Fecal Coliform	
Mill River	MA91-08	Headwaters - Outlet of small unnamed pond between Route 95 and Rowley Road, Boxford to tidally influenced area approximately 1200 feet upstream from Route 1, Rowley/Newbury (through former 2008 segment: Upper Mill Pond MA91015 and through former 2010 segment: Lower Mill Pond MA91008).	6.70	Miles	(Fish Passage Barrier*)	
					(Water Chestnut*)	
					Algae	
					Aquatic Plants (Macrophytes)	
Mill River	MA91-09	From tidally influenced area approximately 1200 feet upstream from Route 1, Rowley/Newbury to mouth at confluence with Parker River, Newbury.	0.09	Square Miles	Fecal Coliform	
Paine Creek	MA91-03	Headwaters east of Town Farm Road, Ipswich to confluence with Eagle Hill River, Ipswich.	0.06	Square Miles	Fecal Coliform	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Parker River	MA91-02	From Parker River Dam#1 (NATID# MA00241) just upstream of Central Street, Newbury to mouth at Plum Island Sound, Newbury.	0.60	Square Miles	Fecal Coliform	
Penn Brook	MA91-16	Headwaters, outlet Baldpate Pond, Boxford to mouth at confluence with Parker River, Georgetown.	3.00	Miles	Benthic Macroinvertebrates	
					Dissolved Oxygen	
Pentucket Pond	MA91010	Georgetown.	92.00	Acres	(Fanwort*)	
					Mercury in Fish Tissue	
Plum Island River	MA91-15	From "high sandy" sandbar just north of the confluence with Pine Island Creek, Newbury to confluence with Plum Island Sound, Newbury (formerly part of 2000 segment: Plum Island River MA84A-23).	0.39	Square Miles	Fecal Coliform	
Plum Island Sound	MA91-12	From the mouth of both the Parker River and Plum Island River, Newbury to the Atlantic Ocean, Ipswich (Includes Ipswich Bay) (formerly reported as 2000 segment: Plum Island Sound MA84A-24).	4.48	Square Miles	Fecal Coliform	
Rock Pond	MA91012	Georgetown.	49.00	Acres	Mercury in Fish Tissue	
Rowley River	MA91-05	Headwaters, confluence with Egypt River, Rowley/Ipswich to mouth at Plum Island Sound, Rowley/Ipswich.	0.25	Square Miles	Fecal Coliform	
Quinebaug						
Alum Pond	MA41001	Sturbridge.	198.00	Acres	Dissolved Oxygen	
Cady Brook	MA41-05	Headwaters, outlet of Glen Echo Lake, Charlton to Charlton WWTP outfall (NPDES: MA0101141), Charlton.	1.50	Miles	(Dewatering*)	
					Ambient Bioassays - Chronic Aquatic Toxicity	
Cady Brook	MA41-06	Charlton WWTP outfall (NPDES: MA0101141), Charlton to mouth at confluence with the Quinebaug River, Southbridge.	5.10	Miles	(Dewatering*)	
					Escherichia Coli (E. Coli)	
					Nutrient/Eutrophication Biological Indicators	
Cohasse Brook	MA41-12	From the outlet of Cohasse Brook Reservoir, Southbridge to mouth at confluence with the Quinebaug River, Southbridge (through former 2008 segment: Wells Pond MA41053).	2.70	Miles	Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	
					Sedimentation/Siltation	
Glen Echo Lake	MA41017	Charlton.	115.00	Acres	Dissolved Oxygen	
Hatchet Brook	MA41-14	From the outlet of No. 3 Reservoir, Southbridge to mouth at confluence with the Quinebaug River, Southbridge.	1.30	Miles	Temperature	
Mckinstry Brook	MA41-13	Headwaters, east of Brookfield Road, Charlton (excluding intermittent portion) to mouth at confluence with the Quinebaug River, Southbridge.	7.30	Miles	(Debris*)	
					Escherichia Coli (E. Coli)	
					Trash	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Morse Pond	MA41033	Southbridge.	41.00	Acres	(Aquatic Plants (Macrophytes)*)	
					Dissolved Oxygen	
					Nutrient/Eutrophication Biological Indicators	
Pistol Pond	MA41057	Sturbridge.	5.00	Acres	Aquatic Plants (Macrophytes)	
					Dissolved Oxygen	
					Transparency / Clarity	
Quinebaug River	MA41-01	Outlet Hamilton Reservoir, Holland, to Sturbridge WWTP outfall (NPDES: MA0100421), Sturbridge (excluding Holland Pond segment MA41022 and East Brimfield Reservoir segment MA41014).	8.20	Miles	(Non-Native Aquatic Plants*)	
					Ambient Bioassays - Chronic Aquatic Toxicity	
					Fish Bioassessments	
					Lack of a coldwater assemblage	
					Mercury in Fish Tissue	
					Temperature	
Quinebaug River	MA41-02	Sturbridge WWTP outfall (NPDES: MA0100421), Sturbridge to confluence with Cady Brook, Southbridge.	6.50	Miles	(Debris*)	
					Algae	
					Lack of a coldwater assemblage	
					Trash	
					Turbidity	
Quinebaug River	MA41-03	Southbridge WWTP outfall (NPDES: MA0100901), Southbridge to dam (NAT ID: MA00114) just upstream of West Dudley Road, Dudley.	2.20	Miles	(Physical substrate habitat alterations*)	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Nutrients	
Quinebaug River	MA41-04	From dam (NAT ID: MA00114) just upstream of West Dudley Road, Dudley to Connecticut state line, Dudley.	2.20	Miles	Fecal Coliform	
Quinebaug River	MA41-09	From confluence with Cady Brook, Southbridge to Southbridge WWTP outfall (NPDES: MA0100901), Southbridge.	1.30	Miles	(Debris*)	
					Ambient Bioassays - Chronic Aquatic Toxicity	
					Benthic Macroinvertebrates	
					Trash	
					Turbidity	
Sibley Pond	MA41047	North Basin, Charlton.	22.00	Acres	Aquatic Plants (Macrophytes)	
					Dissolved Oxygen	
					Turbidity	
Sibley Pond	MA41048	South Basin, Charlton.	19.00	Acres	Aquatic Plants (Macrophytes)	
					Dissolved Oxygen	
					Turbidity	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Unnamed Tributary	MA41-16	Unnamed tributary to Mill Brook, headwaters, outlet Sherman Pond, Brimfield to mouth at confluence with Mill Brook, Brimfield.	1.20	Miles	Benthic Macroinvertebrates	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	
					Sedimentation/Siltation	
West Brook	MA41-17	Headwaters, west of the Dix Hill Road/Route 19 intersection (excluding intermittent portion), Brimfield to mouth at confluence with Mill Brook, Brimfield.	1.80	Miles	Escherichia Coli (E. Coli)	
Shawsheen						
Ames Pond	MA83001	Tewksbury.	76.00	Acres	Mercury in Fish Tissue	
Ballardvale Impoundment	MA83011	Andover (Lowell Junction Pond).	35.00	Acres	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Mercury in Fish Tissue	
Content Brook	MA83-09	Headwaters, outlet Richardson Pond, Billerica, to confluence with Shawsheen River, Tewksbury.	2.40	Miles	Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	2587
Elm Brook	MA83-24	From beginning of channelized portion southwest of Kendall Court, Bedford to confluence with Shawsheen River, Bedford (formerly part of segment MA83-05).	2.40	Miles	(Physical substrate habitat alterations*)	
					Escherichia Coli (E. Coli)	2587
					Fecal Coliform	2587
					Sedimentation/Siltation	
Fosters Pond	MA83005	Andover/Wilmington.	109.00	Acres	(Non-Native Aquatic Plants*)	
					Dissolved Oxygen	
					Mercury in Fish Tissue	
Hussey Pond	MA83009	Andover.	1.00	Acres	Algae	
Long Pond	MA83010	Tewksbury.	44.00	Acres	Algae	
					Chlorophyll-a	
					Dissolved Oxygen	
					Phosphorus, Total	
					Transparency / Clarity	
Pomps Pond	MA83014	Andover.	25.00	Acres	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	
Rabbit Pond	MA83015	Andover.	2.00	Acres	Turbidity	
Shawsheen River	MA83-01	Summer Street (historically listed as Maguire Road), Bedford to confluence with Spring Brook, Bedford.	1.60	Miles	(Physical substrate habitat alterations*)	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	2587
					Fecal Coliform	2587
					Sedimentation/Siltation	
Shawsheen River	MA83-08	Headwater, north of Folly Pond and North Great Road, Lincoln to Summer Street, Bedford.	2.10	Miles	Dissolved Oxygen	
					Escherichia Coli (E. Coli)	2587
					Fecal Coliform	2587



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
					Physical substrate habitat alterations	
Shawsheen River	MA83-17	Confluence with Spring Brook, Bedford to the Burlington Water Department's surface water intake, Billerica. (formerly part of 2002 segment: Shawsheen River MA83-02).	5.70	Miles	Dissolved Oxygen	
					Escherichia Coli (E. Coli)	2587
					Fecal Coliform	2587
Shawsheen River	MA83-18	Burlington Water Department's surface water intake, Billerica to the inlet of Ballardvale Impoundment, Andover (formerly part of 2002 segment: Shawsheen River MA83-02) (since 2016 cycle: excludes Ballardvale Impoundment, pond segment MA83011).	9.50	Miles	Dissolved Oxygen	
					Escherichia Coli (E. Coli)	2587
					Fecal Coliform	2587
Unnamed Tributary	MA83-15	Unnamed tributary to Meadow Brook, also known as "Pinnacle Brook" - from small wetland east of Route 93, Andover, to confluence with Meadow Brook, Tewksbury (includes intermittent portion).	2.10	Miles	(Dewatering*)	
					Chloride	
					Escherichia Coli (E. Coli)	2587
Unnamed Tributary	MA83-20	Unnamed intermittent tributary to the Shawsheen River, from Dascomb Road, Andover to confluence with Shawsheen River, Tewksbury.	0.90	Miles	Fecal Coliform	2587
					Chloride	
Vine Brook	MA83-06	Headwaters (southeast of Granny Hill) near Grant Street, Lexington to confluence with Shawsheen River, Bedford (through former 2014 segment: Butterfield Pond MA83003).	6.80	Miles	Dissolved Oxygen	
					Turbidity	
Webb Brook	MA83-22	Headwaters north of Webb Brook Road, Billerica to confluence with Shawsheen River, Billerica.	1.60	Miles	Escherichia Coli (E. Coli)	
South Coastal						
Aaron River	MA94-28	Outlet Aaron River Reservoir, Cohasset to flow control structure near Beechwood Street (confluence with Bound Brook), Cohasset.	1.00	Miles	(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Algae	
Billington Sea	MA94007	Plymouth.	263.00	Acres	(Fanwort*)	
					Algae	
					Chlorophyll-a	
					Dissolved Oxygen Supersaturation	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
					Turbidity	
Boot Pond	MA94016	Plymouth.	69.00	Acres	Dissolved Oxygen	
Bound Brook	MA94-18	Headwaters, flow control structure near Beechwood Street, Cohasset to mouth at outlet Hunters Pond (confluence with The Gulf), Scituate.	2.10	Miles	Turbidity	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Crossman Pond	MA94032	Kingston.	13.00	Acres	Aquatic Plants (Macrophytes)	
Cushing Brook	MA94-40	Headwaters (perennial portion), east of Pleasant Street, Rockland to mouth at confluence with Drinkwater River, Hanover.	3.10	Miles	Escherichia Coli (E. Coli)	
Drinkwater River	MA94-21	From Whiting Street, Hanover to mouth at inlet Factory Pond, Hanover (through former 2014 segment: Forge Pond MA94037).	3.50	Miles	(Curly-leaf Pondweed*)	
					(Debris*)	
					(Fanwort*)	
					Algae	
					Chlorophyll-a	
					Dissolved Oxygen Supersaturation	
					Escherichia Coli (E. Coli)	61724
					Fecal Coliform	61724
					Mercury in Fish Tissue	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
					Transparency / Clarity	
					Trash	
Duxbury Bay	MA94-15	The waters north and west of a line from Saquish Head to the tip of Plymouth Beach and from there to High Cliff (includes Kingston Bay), Plymouth excluding Back River and Bluefish River, Duxbury and Jones River, Kingston.	12.70	Square Miles	Estuarine Bioassessments	
					Fecal Coliform	61735
Eel River	MA94-38	From outlet Russell Millpond, Plymouth to mouth at Plymouth Harbor, Plymouth (formerly part of 2014 segment: Eel River MA94-23).	2.70	Miles	(Fanwort*)	
					Benthic Macroinvertebrates	
Factory Pond	MA94175	Hanson/Hanover.	51.00	Acres	(Fish Passage Barrier*)	
					Mercury in Fish Tissue	
French Stream	MA94-03	Headwaters on the southeast side of the South Weymouth Naval Air Station, Rockland to mouth at confluence with Drinkwater River, Hanover (excluding the approximately 0.3 mile through Studleys Pond).	5.80	Miles	Dissolved Oxygen	
					Escherichia Coli (E. Coli)	61718
					Fecal Coliform	61718
					Fish Bioassessments	
Furnace Pond	MA94043	Pembroke.	103.00	Acres	Phosphorus, Total	
					(Fanwort*)	
Great Herring Pond	MA94050	Bourne/Plymouth.	415.00	Acres	Dissolved Oxygen	
					Mercury in Fish Tissue	33880
Great South Pond	MA94054	Plymouth.	285.00	Acres	Dissolved Oxygen	
					Mercury in Fish Tissue	33880



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Green Harbor River	MA94-10	Headwaters, outlet Black Mountain Pond, Marshfield to the tidegate at Route 139, Marshfield.	5.70	Miles	(Fish Passage Barrier*)	
					(Flow Regime Modification*)	
					Algae	
					Turbidity	
Indian Brook	MA94-51	outlet of cranberry bogs west of Indian Brook Road, Plymouth to mouth at inlet Cape Cod Bay, Plymouth.	1.40	Miles	(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
Indian Head Pond	MA94071	Hanson.	120.00	Acres	(Fish Passage Barrier*)	
					Harmful Algal Blooms	
Indian Head River	MA94-04	Headwaters, outlet Factory Pond, Hanover/Hanson to Curtis Crossing Dam (also called Ludhams Ford Dam (NATID: MA00428)) west of Elm Street, Hanover/Pembroke.	2.80	Miles	(Fish Passage Barrier*)	
					Escherichia Coli (E. Coli)	
					Mercury in Fish Tissue	
Indian Head River	MA94-22	From Curtis Crossing Dam (also called Ludhams Ford Dam (NATID: MA00428)) west of Elm Street, Hanover/Pembroke to mouth at confluence with Herring Brook, (forming headwaters of North River) Hanover/Pembroke.	0.90	Miles	Mercury in Fish Tissue	
Jones River	MA94-12	Headwaters, outlet Silver Lake, Kingston to former dam (NATID: MA00396) near Wapping Road, Kingston.	4.10	Miles	(Dewatering*)	
					(Fish Passage Barrier*)	
					Algae	
					Aquatic Plants (Macrophytes)	
					Dissolved Oxygen	
Jones River	MA94-13	From former dam (NATID: MA00396) near Wapping Road, Kingston to dam (NATID: MA00395) at Elm Street, Kingston.	0.90	Miles	Turbidity	
					(Dewatering*)	
					Algae	
					Aquatic Plants (Macrophytes)	
					Dissolved Oxygen	
Jones River	MA94-14	From dam (NATID: MA00395) at Elm Street, Kingston to mouth at Kingston Bay, Kingston.	0.09	Square Miles	Turbidity	
					Fecal Coliform	61734
					Fish Bioassessments	
					Nutrient/Eutrophication Biological Indicators	
Lily Pond	MA94179	Cohasset.	50.00	Acres	(Curly-leaf Pondweed*)	
					(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Transparency / Clarity	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Longwater Brook	MA94-39	Headwaters, south of Route 3, Norwell to mouth at confluence with Drinkwater River, Hanover.	2.80	Miles	Escherichia Coli (E. Coli)	
Musquashcut Pond	MA94-33	Scituate (formerly reported as 2004 segment: Musquashcut Pond MA94105).	0.11	Square Miles	(Flow Regime Modification*)	
					Algae	
					Chlorophyll-a	
					Dissolved Oxygen Supersaturation	
					Fecal Coliform	61713
North River	MA94-05	Headwaters, confluence of Indian Head River and Herring Brook, Hanover/Pembroke to Route 3A, Marshfield/Scituate.	0.30	Square Miles	Phosphorus, Total	
					Fecal Coliform	61725
Old Oaken Bucket Pond	MA94113	Scituate.	9.00	Acres	Mercury in Fish Tissue	
					(Fanwort*)	
Oldham Pond	MA94114	Pembroke/Hanson.	232.00	Acres	(Non-Native Aquatic Plants*)	
					Phosphorus, Total	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
Plymouth Harbor	MA94-16	The waters south of a line drawn from the tip of Plymouth Beach to High Cliff, Plymouth.	2.53	Square Miles	(Non-Native Fish/Shellfish/Zooplankton*)	
					Harmful Algal Blooms	
Russell Millpond	MA94132	Plymouth.	42.00	Acres	Estuarine Bioassessments	
					Fecal Coliform	61737
Savery Pond	MA94136	Plymouth.	29.00	Acres	Algae	
					Dissolved Oxygen	
					Harmful Algal Blooms	
Scituate Harbor	MA94-02	The waters west of a line across the mouth of Scituate Harbor, from the elbow of the jetty southeast off Lighthouse Point to the jetty northeast of the U.S. Coast Guard Station, Scituate.	0.32	Square Miles	Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
					Estuarine Bioassessments	
Silver Lake	MA94143	Pembroke/Plympton/Kingston.	616.00	Acres	Fecal Coliform	61715
					(Fish Passage Barrier*)	
					(Flow Regime Modification*)	
Smelt Brook	MA94-54	Headwaters outlet Smelt Pond, Kingston to tidal portion north of Route 3A, Kingston (through former 2016 segment: Foundry Pond MA94038).	2.10	Miles	Dissolved Oxygen	
					(Fish Passage Barrier*)	
					Turbidity	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
South River	MA94-08	Headwaters, outlet unnamed pond north of Congress Street, Duxbury to dam near Main Street (Route 3A), Marshfield (through former 2014 segment: South River Pond MA94148).	4.90	Miles	(Fish Passage Barrier*)	
					Dissolved Oxygen	
Studleys Pond	MA94151	Rockland.	25.00	Acres	Fecal Coliform	
Wampatuck Pond	MA94168	Hanson.	63.00	Acres	(Fanwort*)	
					(Fish Passage Barrier*)	
					Chlorophyll-a	
					Dissolved Oxygen Supersaturation	
					Harmful Algal Blooms	
					Phosphorus, Total	
					Transparency / Clarity	
Taunton						
Ames Long Pond	MA62001	Stoughton/Easton.	88.00	Acres	(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Turbidity	
Big Bearhole Pond	MA62011	Taunton.	38.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					Dissolved Oxygen	
Cain Pond	MA62030	Taunton.	3.00	Acres	Dissolved Oxygen	
					Turbidity	
Island Grove Pond	MA62094	Abington.	31.00	Acres	(Fanwort*)	
					Algae	
					Turbidity	
Lake Sabbatia	MA62166	Taunton.	265.00	Acres	(Fanwort*)	
					(Non-Native Aquatic Plants*)	
					Dissolved Oxygen	
Matfield River	MA62-32	Headwaters, confluence Beaver Brook and Salisbury Plain River, East Bridgewater to mouth at confluence with Town River forming headwaters Taunton River, Bridgewater.	6.30	Miles	Algae	
					Benthic Macroinvertebrates	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	40308
					Fecal Coliform	40308
					Nutrient/Eutrophication Biological Indicators	
					Odor	
					Phosphorus, Total	



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Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Mill River	MA62-29	Headwaters, outlet Lake Sabbatia, Taunton to mouth at confluence with the Taunton River, Taunton (through former 2014 segment: Whittenton Impoundment MA62228).	4.20	Miles	(Fanwort*) Temperature	
Monponsett Pond, East Basin	MA62218	[East Basin] Halifax.	247.00	Acres	(Curly-leaf Pondweed*) (Eurasian Water Milfoil, Myriophyllum Spicatum*) (Fanwort*) (Non-Native Aquatic Plants*) Chlorophyll-a Harmful Algal Blooms Mercury in Fish Tissue Phosphorus, Total	 33880
Monponsett Pond, West Basin	MA62119	[West Basin] Halifax/Hanson.	283.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*) (Fanwort*) Chlorophyll-a Harmful Algal Blooms Phosphorus, Total Transparency / Clarity	
Muddy Cove Brook Pond	MA62124	Dighton.	23.00	Acres	(Fish Passage Barrier*) Algae Turbidity	
Nemasket River	MA62-25	Headwaters, outlet Assawompset Pond, Lakeville/Middleborough to Middleborough WWTP (NPDES: MA0101591) discharge, Middleborough.	6.20	Miles	Ambient Bioassays - Chronic Aquatic Toxicity Dissolved Oxygen Temperature	
Norton Reservoir	MA62134	Norton/Mansfield.	557.00	Acres	(Fanwort*) (Non-Native Aquatic Plants*) Algae Dioxin (including 2,3,7,8-TCDD) Pentachlorophenol (PCP) Phosphorus, Total Turbidity	
Reservoir (White Oak Reservoir)	MA62157	Hanson.	13.00	Acres	(Fanwort*) Nutrient/Eutrophication Biological Indicators Phosphorus, Total	
Robinson Brook	MA62-14	Headwaters, outlet Hersey Pond, Foxborough to mouth at confluence with Rumford River, Mansfield.	1.90	Miles	(Physical substrate habitat alterations*) Benthic Macroinvertebrates	



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The 303(d) List – “Waters requiring a TMDL”

Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Rumford River	MA62-63	From outlet Glue Factory Pond, Foxborough to inlet Norton Reservoir, Norton (through former 2014 pond segments; Fulton Pond MA62075, Hodges Pond MA62091, and Cabot Pond MA62029) (formerly part of 2014 segment: Rumford River MA62-39 [MA62-15 (2004)]).	5.10	Miles	(Curly-leaf Pondweed*)	
					Benthic Macroinvertebrates	
					Dioxin (including 2,3,7,8-TCDD)	
					Fish Bioassessments	
					Pentachlorophenol (PCP)	
Salisbury Brook	MA62-08	Headwaters, outlet Cross Pond, Brockton to mouth at confluence with Trout Brook forming headwaters Salibury Plain River, Brockton.	2.50	Miles	(Debris*)	
					(Non-Native Aquatic Plants*)	
					(Physical substrate habitat alterations*)	
					Algae	
					Benthic Macroinvertebrates	
					Escherichia Coli (E. Coli)	40308
					Fecal Coliform	40308
					Sedimentation/Siltation	
Salisbury Plain River	MA62-05	Headwaters, confluence of Trout and Salisbury brooks, Brockton to the Brockton Advanced Water Reclamation Facility (AWRF) discharge (NPDES: MA0101010), Brockton.	2.40	Miles	Trash	
					(Debris*)	
					(Physical substrate habitat alterations*)	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	40308
					Fecal Coliform	40308
					Sedimentation/Siltation	
Salisbury Plain River	MA62-06	From the Brockton Advanced Water Reclamation Facility (AWRF) discharge (NPDES: MA0101010), Brockton to mouth at confluence with Beaver Brook forming headwaters Matfield River, East Bridgewater.	2.30	Miles	Trash	
					Algae	
					Benthic Macroinvertebrates	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	40308
					Fecal Coliform	40308
					Odor	
Sassaquin Pond	MA62232	New Bedford (formerly reported as 2002 segment: Sassaquin Pond MA95129).	36.00	Acres	Phosphorus, Total	
					Turbidity	
					(Curly-leaf Pondweed*)	
					Algae	
					Fecal Coliform	
Satucket River	MA62-10	Headwaters, outlet Robbins Pond, East Bridgewater to mouth at confluence with the Matfield River, East Bridgewater.	5.60	Miles	Harmful Algal Blooms	
					Odor	
					(Non-Native Aquatic Plants*)	
					Temperature	



Category 5 waters listed alphabetically by major watershed
The 303(d) List – “Waters requiring a TMDL”

Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Shumatuscasant River	MA62-33	Headwaters, from wetland northwest of Vineyard Road, Abington to mouth at confluence with Poor Meadow Brook, Hanson (through former 2014 segment: Hobart Pond MA62090) (excluding 0.5 mile through Island Grove Pond MA62094).	8.00	Miles	(Non-Native Aquatic Plants*)	
					(Physical substrate habitat alterations*)	
					Dissolved Oxygen	
					Fecal Coliform	40308
					Sedimentation/Siltation	
Stetson Pond	MA62182	Pembroke.	88.00	Acres	(Curly-leaf Pondweed*)	
					(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Fanwort*)	
					(Water Chestnut*)	
					Dissolved Oxygen	
					Harmful Algal Blooms	
					Phosphorus, Total	
Taunton River	MA62-01	Headwaters, confluence of Town and Matfield rivers, Bridgewater to Route 24 bridge, Taunton/Raynham.	19.50	Miles	Dissolved Oxygen	
					Escherichia Coli (E. Coli)	
Taunton River	MA62-02	From Route 24 bridge, Taunton/Raynham to Berkley Bridge, Dighton/Berkley.	0.28	Square Miles	Chlorophyll-a	
					Enterococcus	40310
					Fecal Coliform	40310
					Nitrogen, Total	
					Phosphorus, Total	
Taunton River	MA62-03	From Berkley Bridge, Dighton/Berkley to confluence with Assonet River at a line from Sandy Point, Somerset northeasterly to the southwestern tip of Assonet Neck, Berkley.	0.92	Square Miles	Dissolved Oxygen	
					Fecal Coliform	40310
					Nitrogen, Total	
Taunton River	MA62-04	From confluence with Assonet River at a line from Sandy Point, Somerset northeasterly to the southwestern tip of Assonet Neck, Berkley to mouth just upstream of the Braga Bridge, Somerset/Fall River.	2.60	Square Miles	Dissolved Oxygen	
					Enterococcus	40310
					Fecal Coliform	40310
					Fish Bioassessments	
					Nitrogen, Total	
Trout Brook	MA62-07	Headwaters, perennial portion, northeast of Argyle Avenue and west of Conrail Line, Avon to mouth at confluence with Salisbury Brook forming headwaters Salisbury Plain River, Brockton.	3.40	Miles	(Habitat Assessment*)	
					Benthic Macroinvertebrates	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	40308
					Fecal Coliform	40308
Unnamed Tributary	MA62-42	Headwaters, south of Slab Bridge Road (in Cedar Swamp portion of Freetown-Fall River State Forest), Freetown to mouth at confluence with Cedar Swamp River, Lakeville.	4.00	Miles	Benthic Macroinvertebrates	
					Fish Bioassessments	



Category 5 waters listed alphabetically by major watershed
The 303(d) List – “Waters requiring a TMDL”

Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Unnamed Tributary	MA62-48	Channel from Taunton Municipal Lighting Plant, Taunton to mouth at confluence with the Taunton River, Taunton.	0.002	Square Miles	(Flow Regime Modification*)	
					(Physical substrate habitat alterations*)	
					Benthic Macroinvertebrates	
					Fish Bioassessments	
					Temperature	
Wading River	MA62-47	Headwaters, outlet Furnace Lake, Foxborough to Balcolm Street, Mansfield (through former 2014 pond segments: Robinson Pond MA62163 and Blakes Pond MA62221) (formerly part of 2004 segment: Wading River MA62-17) (1987 Wrentham quad depicts river incorrectly).	5.00	Miles	Algae	
Watson Pond	MA62205	Taunton.	78.00	Acres	(Fanwort*)	
					Algae	
					Dissolved Oxygen	
					Enterococcus	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
					Transparency / Clarity	
Woods Pond	MA62220	Middleborough.	51.00	Acres	(Fanwort*)	
					Turbidity	
Ten Mile						
Bungay River	MA52-06	Headwaters, outlet Greenwood Lake, North Attleborough to confluence with Ten Mile River, Attleboro.	5.10	Miles	Benthic Macroinvertebrates	
					Dissolved Oxygen	
Cargill Pond	MA52004	Plainville.	2.00	Acres	Turbidity	
Central Pond	MA52006	Seekonk, MA/Pawtucket, RI/Providence, RI (size indicates portion in Massachusetts).	6.00	Acres	Algae	
					Aquatic Plants (Macrophytes)	
					Dissolved Oxygen	
					Dissolved Oxygen Supersaturation	
					Organic Enrichment (Sewage) Biological Indicators	
				Phosphorus, Total		
Coles Brook	MA52-11	Headwaters, Grassie Swamp west of Allens Lane, Rehoboth to inlet Central Pond, Seekonk.	4.20	Miles	(Dewatering*)	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	



Category 5 waters listed alphabetically by major watershed
The 303(d) List – “Waters requiring a TMDL”

Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Falls Pond, North Basin	MA52013	North Attleborough.	54.00	Acres	Algae	
					Dissolved Oxygen	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
Fourmile Brook	MA52-10	Headwaters, outlet Manchester Pond Reservoir, Attleboro to inlet Orrs Pond, Attleboro.	1.00	Miles	Sedimentation/Siltation	
James V. Turner Reservoir	MA52022	Seekonk, MA/E. Providence, RI (size indicates portion in Massachusetts).	28.00	Acres	Algae	
					Aquatic Plants (Macrophytes)	
					Dissolved Oxygen Supersaturation	
					Harmful Algal Blooms	
					Organic Enrichment (Sewage) Biological Indicators	
Lake Como	MA52010	Attleboro.	5.00	Acres	Phosphorus, Total	
					(Non-Native Aquatic Plants*)	
					Algae	
Plain Street Pond	MA52032	Mansfield.	12.00	Acres	Turbidity	
					(Non-Native Aquatic Plants*)	
Scotts Brook	MA52-09	Headwaters, north of High Street, North Attleborough to confluence with Ten Mile River, North Attleborough.	2.10	Miles	Algae	
					(Dewatering*)	
Sevenmile River	MA52-07	Headwaters, outlet Hoppin Hill Reservoir, North Attleborough to inlet Orrs Pond, Attleboro (thru Luther Reservoir formerly segment MA52025).	3.20	Miles	Escherichia Coli (E. Coli)	
					Escherichia Coli (E. Coli)	
Sevenmile River	MA52-08	Outlet Orrs Pond, Attleboro to confluence with Ten Mile River, Pawtucket, Rhode Island.	3.40	Miles	Escherichia Coli (E. Coli)	
					Fecal Coliform	
Speedway Brook	MA52-05	(locally known as Thacher Brook) Headwaters, Attleboro to inlet of Dodgeville Pond (a Ten Mile River impoundment), Attleboro.	0.90	Miles	(Alteration in stream-side or littoral vegetative covers*)	
					(Habitat Assessment*)	
					Benthic Macroinvertebrates	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Metals	
Ten Mile River	MA52-01	Headwaters, outlet Cargill Pond, Plainville to West Bacon Street, Plainville (through Fuller Pond formerly segment MA52016).	1.50	Miles	Sedimentation/Siltation	
					Metals	



Category 5 waters listed alphabetically by major watershed
The 303(d) List – “Waters requiring a TMDL”

Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Ten Mile River	MA52-02	West Bacon Street, Plainville to North Attleborough WWTP discharge (NPDES: MA0101036), Attleboro (excluding 0.9 miles thru Falls Pond segment MA52013, but including thru Wetherells Pond formerly segment MA52041) (HQW qualifier applies to portion of river upstream of Whiting Pond Dam (NATID: MA00859)).	4.10	Miles	Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Metals	
Ten Mile River	MA52-03	North Attleborough WWTP discharge (NPDES: MA0101036), Attleboro to the MA/RI border near Central Avenue, Seekonk, MA/Pawtucket, RI (thru former segments; Farmers Pond MA52015, Mechanics Pond MA52027, Dodgeville Pond MA52011, and Hebronville Pond MA52020).	9.10	Miles	(Aquatic Plants (Macrophytes)*)	
					Algae	
					Benthic Macroinvertebrates	
					Chlordane in Fish Tissue	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	
					Organic Enrichment (Sewage) Biological Indicators	
					Phosphorus, Total	
Unspecified Metals in Sediment						
Westfield						
Ashley Brook	MA32-37	Headwaters (perennial portion), south of Hillside Road, Westfield to mouth at confluence with Jacks Brook, Westfield.	0.50	Miles	Escherichia Coli (E. Coli)	
Buck Pond	MA32012	Westfield.	23.00	Acres	(Non-Native Aquatic Plants*)	
					Chlorophyll-a	
					Dissolved Oxygen	
Congamond Lakes	MA32021	[Middle Basin] Southwick.	279.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Non-Native Fish/Shellfish/Zooplankton*)	
					Dissolved Oxygen	
					Harmful Algal Blooms	
Congamond Lakes	MA32022	[North Basin] Southwick.	46.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					Dissolved Oxygen	
Congamond Lakes	MA32023	[South Basin] Southwick.	144.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					Dissolved Oxygen	
					Nutrient/Eutrophication Biological Indicators	



Category 5 waters listed alphabetically by major watershed
The 303(d) List – “Waters requiring a TMDL”

Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Dead Branch (Brook)	MA32-63	From outlet of Long Pond, Chesterfield to mouth at confluence with Westfield River (Knightville Reservoir), Huntington/Chesterfield.	4.10	Miles	Lack of a coldwater assemblage	
Horse Pond	MA32043	Westfield.	24.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Non-Native Aquatic Plants*)	
					Chlorophyll-a	
					Dissolved Oxygen	
Jacks Brook	MA32-39	Headwaters (perennial portion), east of Fowler Road, Westfield to inlet of Crane Pond/Little River, Westfield.	2.40	Miles	Escherichia Coli (E. Coli)	
Little River	MA32-08	Horton's Bridge, Westfield to confluence with Westfield River, Westfield.	4.90	Miles	Escherichia Coli (E. Coli)	
					Fecal Coliform	
Little River	MA32-16	Headwaters, confluence of Watts and Wards streams, Ringville (locality in Worthington), to mouth at confluence with Westfield River, Huntington.	5.70	Miles	Temperature	
Little River	MA32-36	From Springfield Water Works Intake Dam (NATID: MA00708) northwest of Gorge Road, Russell to Horton's Bridge, Westfield (formerly part of segment MA32-26).	5.80	Miles	Combined Biota/Habitat Bioassessments	
					Escherichia Coli (E. Coli)	
Middle Branch Westfield River	MA32-65	Source in Peru State Wildlife Management Area, north of Pierce Road, Peru to Kinnebrook Road, Dayville (locality in Chester) (formerly part of 2014 segment: Middle Branch Westfield River MA32-02).	13.70	Miles	Temperature	
Miller Brook	MA32-27	Source, outlet small unnamed pond in Robinson State Park, north of North Street, Agawam to mouth at confluence with Westfield River, Agawam.	0.60	Miles	Escherichia Coli (E. Coli)	
Moose Meadow Brook	MA32-41	Outlet Westfield Reservoir to mouth at confluence with Westfield River, Westfield (formerly part of segment MA32-23).	4.80	Miles	Escherichia Coli (E. Coli)	
					Fecal Coliform	
Pequot Pond	MA32055	Westfield/Southampton.	155.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					(Non-Native Aquatic Plants*)	
					Chlorophyll-a	
					Dissolved Oxygen	
					Enterococcus	
					Phosphorus, Total	
Potash Brook	MA32-22	Source, outlet Dunlap Pond, Blandford to mouth at confluence with Westfield River, Village of Woronoco, Russell.	5.20	Miles	Escherichia Coli (E. Coli)	



Category 5 waters listed alphabetically by major watershed
The 303(d) List – “Waters requiring a TMDL”

Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Powdermill Brook	MA32-09	Headwaters, perennial portion northeast of Montgomery Road (west of Grindstone Mountain), Westfield to mouth at confluence with Westfield River, Westfield.	8.40	Miles	Algae	
					Escherichia Coli (E. Coli)	
					Sedimentation/Siltation	
					Turbidity	
West Falls Branch	MA32-13	Headwaters (perennial portion), at confluence with Bronson Brook, northeast at the intersection of Dingle Road and Route 143, Worthington to mouth at confluence with Westfield River near the village of West Chesterfield, Chesterfield. (formerly identified by the Massachusetts Stream Classification Program as West Branch).	2.90	Miles	Temperature	
Westfield River	MA32-04	Headwaters, confluence of Drowned Land Brook and Center Brook, Savoy to confluence with Middle Branch Westfield River, Huntington.	33.10	Miles	Enterococcus	
					Temperature	
White Brook	MA32-28	Source just north of Route 147, Agawam to mouth at confluence with Westfield River, Agawam.	0.90	Miles	Escherichia Coli (E. Coli)	
Windsor Pond	MA32076	Windsor.	46.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					Dissolved Oxygen	
					Mercury in Fish Tissue	42410



Appendix D
Belle Isle Inlet Dilution Calculations

Lockwood Remediation
Technologies LLC



From: [Brian Caccavale](#)
To: [Ruan, Xiaodan \(DEP\)](#)
Subject: 7Q10 Value/Discharge Information Confirmation - 93 Bennington Street DRGP, Revere, MA
Date: Tuesday, January 10, 2023 6:24:00 AM
Attachments: [image001.jpg](#)
[StreamStats Report_93 Bennington Street.pdf](#)
[22I0086 final report.pdf](#)

Good morning Xiaodan,

I'd like to confirm the following 7Q10 value for the upcoming DRGP project located at 93 Bennington Street in Revere, MA.

I have attached the StreamStats output and provided the following project information:

Site Address: 93 Bennington Street, Revere, MA

Type of Discharge: via drain outlet into the Belle Isle Inlet at the following coordinates

Lat: 42° 23' 35.6" N

Long: 70° 59' 39.55" W

Stormwater Outfall ID: N/A

Calculations:

7Q10 Low Flow Value (StreamStats): Undefined

Design Discharge Flow from site: 150 gpm = 0.216 MGD

Dilution Factor: 0 (no dilution)

Dewatering/Remediation Activity: Temporary construction dewatering activities. Treated groundwater will discharge to a catch basin located along Bennington Street, which will ultimately discharge to an outfall to the Belle Isle Inlet.

Type of water to be discharged: Groundwater

Hardness of receiving water: 921 mg/L

pH of the receiving water: 7.04

Temperature of receiving water: 18.7 °C or 65.7 °F

Please find attached the laboratory analytical report for the Source Water and Receiving Water samples collected on 12/2/22.

Please let me know if you need further information.

Thank you, Xiaodan.

-Brian

Brian Caccavale
Project Manager

Lockwood Remediation Technologies, LLC

89 Crawford Street
Leominster, MA 01453
O: 774-450-7177
C: 978-751-1265
bcaccavale@lrt-llc.net

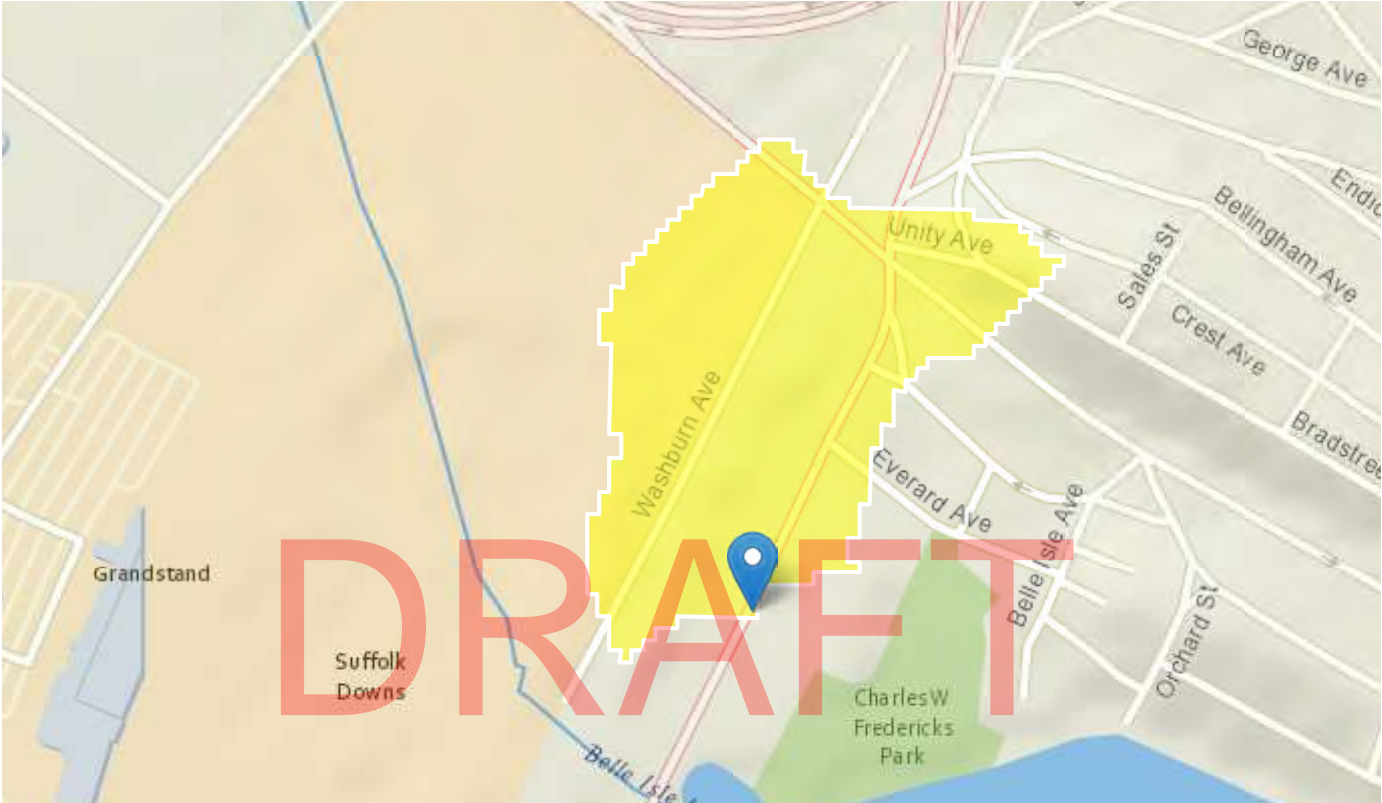
www.lrt-llc.net **Check out
our new website! What
solutions can we provide
for you?**



DRAFT

StreamStats Report

Region ID: MA
Workspace ID: MA20221219211556137000
Clicked Point (Latitude, Longitude): 42.39468, -70.99346
Time: 2022-12-19 16:16:16 -0500



93 Bennington Street

Collapse All

➤ Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLDEM250	Mean basin slope computed from 1:250K DEM	0.794	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	-100000	square mile per mile
DRNAREA	Area that drains to a point on a stream	0.0398	square miles
ELEV	Mean Basin Elevation	12.8	feet

Parameter Code	Parameter Description	Value	Unit
LC06STOR	Percentage of water bodies and wetlands determined from the NLCD 2006	0	percent
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless

➤ Low-Flow Statistics

Low-Flow Statistics Parameters [Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0398	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	0.794	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	-100000	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

Low-Flow Statistics Disclaimers [Statewide Low Flow WRIR00 4135]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors. Equation M7D2Y in GC320 could not be calculated due to undefined basin characteristic. Equation M7D10Y in GC320 could not be calculated due to undefined basin characteristic.

Low-Flow Statistics Flow Report [Statewide Low Flow WRIR00 4135]

Statistic	Value	Unit
7 Day 2 Year Low Flow	undefined	ft ³ /s
7 Day 10 Year Low Flow	undefined	ft ³ /s

Low-Flow Statistics Citations

Ries, K.G., III, 2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (<http://pubs.usgs.gov/wri/wri004135/>)

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.11.1

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

DRAFT

Appendix E
Laboratory Analytical Reports

Lockwood Remediation
Technologies LLC



CERTIFICATE OF ANALYSIS

Brian Caccavale
Lockwood Remediation Technologies LLC
89 Crawford Street
Leominster, MA 01453

RE: 93 Bennington - RGP (2-2535)
ESS Laboratory Work Order Number: 22L0086

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.



Laurel Stoddard
Laboratory Director

REVIEWED*By ESS Laboratory at 4:27 pm, Dec 09, 2022***Analytical Summary**

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Lockwood Remediation Technologies LLC
Client Project ID: 93 Bennington - RGP

ESS Laboratory Work Order: 22L0086

SAMPLE RECEIPT

The following samples were received on December 02, 2022 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the 2022 Remediation General Permit under the National Pollutant Discharge Elimination System (NPDES).

ESS Laboratory is unable to achieve the required detection limit of 0.4 mg/L for Ethanol for the RGP permit. We have also been unable to procure a subcontract laboatory that is able to achieve this limit. The data for Ethanol has been reported using our current method reporting limit.

DRAFT

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
22L0086-01	Source Water	Ground Water	1664A, 180.1, 200.7, 245.1, 2540C, 2540D, 300.0, 365.1, 4500 CN CE, 4500 H+ B, 4500Cl D, 4500N, 8100M, CALC
22L0086-02	Receiving Water	Surface Water	1664A, 180.1, 200.7, 245.1, 2540C, 2540D, 4500 H+ B, CALC



CERTIFICATE OF ANALYSIS

Client Name: Lockwood Remediation Technologies LLC
Client Project ID: 93 Bennington - RGP

ESS Laboratory Work Order: 22L0086

PROJECT NARRATIVE

Classical Chemistry

22L0086-01 The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.

22L0086-02 The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.

Total Metals

22L0086-01 Elevated Method Reporting Limits due to sample matrix (EL).

Arsenic , Cadmium , Selenium

22L0086-02 Elevated Method Reporting Limits due to sample matrix (EL).

Arsenic , Cadmium , Selenium

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Lockwood Remediation Technologies LLC
Client Project ID: 93 Bennington - RGP

ESS Laboratory Work Order: 22L0086

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

DRAFT

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Lockwood Remediation Technologies LLC
Client Project ID: 93 Bennington - RGP
Client Sample ID: Source Water
Date Sampled: 12/02/22 11:10
Percent Solids: N/A

ESS Laboratory Work Order: 22L0086
ESS Laboratory Sample ID: 22L0086-01
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (5.0)		200.7		1	CEV	12/05/22 21:08	100	10	DL20507
Arsenic	EL ND (5.0)		200.7		1	CEV	12/05/22 21:08	100	10	DL20507
Cadmium	EL ND (1.0)		200.7		1	CEV	12/05/22 21:08	100	10	DL20507
Chromium	3.3 (2.0)		200.7		1	CEV	12/05/22 21:08	100	10	DL20507
Copper	56.3 (2.0)		200.7		1	CEV	12/05/22 21:08	100	10	DL20507
Iron	1270 (10.0)		200.7		1	CEV	12/05/22 21:08	100	10	DL20507
Lead	115 (2.0)		200.7		1	CEV	12/05/22 21:08	100	10	DL20507
Mercury	0.5 (0.2)		245.1		1	YIV	12/06/22 11:10	20	40	DL20508
Nickel	13.8 (5.0)		200.7		1	CEV	12/05/22 21:08	100	10	DL20507
Selenium	EL ND (5.0)		200.7		1	CEV	12/05/22 21:08	100	10	DL20507
Silver	ND (1.0)		200.7		1	CEV	12/05/22 21:08	100	10	DL20507
Total Hardness	419000 (4120)		CALC		50	CEV	12/06/22 11:42	1	1	[CALC]
Zinc	208 (5.0)		200.7		1	CEV	12/05/22 21:08	100	10	DL20507



CERTIFICATE OF ANALYSIS

Client Name: Lockwood Remediation Technologies LLC
Client Project ID: 93 Bennington - RGP
Client Sample ID: Source Water
Date Sampled: 12/02/22 11:10
Percent Solids: N/A
Initial Volume: 1020ml
Final Volume: 1ml
Extraction Method: 3510C

ESS Laboratory Work Order: 22L0086
ESS Laboratory Sample ID: 22L0086-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: TLW
Prepared: 12/7/22 12:45

8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Total Petroleum Hydrocarbons (C9-C36)	1440 (98.0)		8100M		1	12/08/22 13:16		DL20702
<hr/>								
		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
Surrogate: O-Terphenyl		88 %		40-140				

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CERTIFICATE OF ANALYSIS

Client Name: Lockwood Remediation Technologies LLC
Client Project ID: 93 Bennington - RGP
Client Sample ID: Source Water
Date Sampled: 12/02/22 11:10
Percent Solids: N/A

ESS Laboratory Work Order: 22L0086
ESS Laboratory Sample ID: 22L0086-01
Sample Matrix: Ground Water

Classical Chemistry

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Chloride	880 (50.0)		300.0		100	JLK	12/06/22 18:53	mg/L	DL20637
Oil & Grease	ND (4.9)		1664A		1	LAB	12/06/22 14:19	mg/L	DL20612
pH	6.95 (N/A)		4500 H+ B		1	EAM	12/02/22 19:47	S.U.	DL20255
pH Sample Temp	Aqueous pH measured in water at 18.9 °C. (N/A)								
Total Cyanide	ND (5.00)		4500 CN CE		1	EEM	12/06/22 14:05	ug/L	DL20613
Total Dissolved Solids	2080 (10)		2540C		1	CCP	12/07/22 16:52	mg/L	DL20726
Total Nitrogen	13.2 (2.00)		4500N		10	EEM	12/08/22 15:51	mg/L	[CALC]
Total Phosphate as P	0.12 (0.10)		365.1		1	JLK	12/06/22 17:32	mg/L	DL20635
Total Residual Chlorine	ND (20.0)		4500Cl D		1	EAM	12/02/22 17:30	ug/L	DL20237
Total Suspended Solids	538 (10)		2540D		1	CCP	12/05/22 16:28	mg/L	DL20533
Turbidity	995 (25.0)		180.1		25	EAM	12/02/22 17:15	NTU	DL20235



CERTIFICATE OF ANALYSIS

Client Name: Lockwood Remediation Technologies LLC
Client Project ID: 93 Bennington - RGP
Client Sample ID: Recieving Water
Date Sampled: 12/02/22 11:50
Percent Solids: N/A

ESS Laboratory Work Order: 22L0086
ESS Laboratory Sample ID: 22L0086-02
Sample Matrix: Surface Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (5.0)		200.7		1	CEV	12/05/22 21:10	100	10	DL20507
Arsenic	EL ND (5.0)		200.7		1	CEV	12/05/22 21:10	100	10	DL20507
Cadmium	EL ND (1.0)		200.7		1	CEV	12/05/22 21:10	100	10	DL20507
Chromium	ND (2.0)		200.7		1	CEV	12/05/22 21:10	100	10	DL20507
Copper	4.7 (2.0)		200.7		1	CEV	12/05/22 21:10	100	10	DL20507
Iron	1420 (10.0)		200.7		1	CEV	12/05/22 21:10	100	10	DL20507
Lead	ND (2.0)		200.7		1	CEV	12/05/22 21:10	100	10	DL20507
Mercury	ND (0.2)		245.1		1	YIV	12/06/22 11:12	20	40	DL20508
Nickel	ND (5.0)		200.7		1	CEV	12/05/22 21:10	100	10	DL20507
Selenium	EL ND (5.0)		200.7		1	CEV	12/05/22 21:10	100	10	DL20507
Silver	ND (1.0)		200.7		1	CEV	12/05/22 21:10	100	10	DL20507
Total Hardness	921000 (4120)		CALC		50	CEV	12/06/22 11:44	1	1	[CALC]
Zinc	38.9 (5.0)		200.7		1	CEV	12/05/22 21:10	100	10	DL20507



CERTIFICATE OF ANALYSIS

Client Name: Lockwood Remediation Technologies LLC
Client Project ID: 93 Bennington - RGP
Client Sample ID: Recieving Water
Date Sampled: 12/02/22 11:50
Percent Solids: N/A

ESS Laboratory Work Order: 22L0086
ESS Laboratory Sample ID: 22L0086-02
Sample Matrix: Surface Water

Classical Chemistry

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Oil & Grease	ND (4.9)		1664A		1	LAB	12/06/22 14:19	mg/L	DL20612
pH	7.04 (N/A)		4500 H+ B		1	EAM	12/02/22 19:47	S.U.	DL20255
pH Sample Temp	Aqueous pH measured in water at 18.7 °C. (N/A)								
Total Dissolved Solids	270 (10)		2540C		1	CCP	12/07/22 16:52	mg/L	DL20726
Total Suspended Solids	24 (5)		2540D		1	CCP	12/05/22 16:28	mg/L	DL20533
Turbidity	18.0 (1.0)		180.1		1	EAM	12/02/22 17:15	NTU	DL20235

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CERTIFICATE OF ANALYSIS

Client Name: Lockwood Remediation Technologies LLC
Client Project ID: 93 Bennington - RGP

ESS Laboratory Work Order: 22L0086

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Total Metals

Batch DL20507 - 3005A/200.7

Blank

Antimony	ND	5.0	ug/L
Arsenic	ND	5.0	ug/L
Cadmium	ND	1.0	ug/L
Calcium	ND	0.020	mg/L
Chromium	ND	2.0	ug/L
Copper	ND	2.0	ug/L
Iron	ND	10.0	ug/L
Lead	ND	2.0	ug/L
Magnesium	ND	0.020	mg/L
Nickel	ND	5.0	ug/L
Selenium	ND	5.0	ug/L
Silver	ND	1.0	ug/L
Zinc	ND	5.0	ug/L

LCS

Antimony	51.8	5.0	ug/L	50.00	104	85-115
Arsenic	49.7	5.0	ug/L	50.00	99	85-115
Cadmium	24.6	1.0	ug/L	25.00	98	85-115
Calcium	0.527	0.020	mg/L	0.5000	105	85-115
Chromium	49.7	2.0	ug/L	50.00	99	85-115
Copper	51.4	2.0	ug/L	50.00	103	85-115
Iron	251	10.0	ug/L	250.0	100	85-115
Lead	52.3	2.0	ug/L	50.00	105	85-115
Magnesium	0.518	0.020	mg/L	0.5000	104	85-115
Nickel	51.2	5.0	ug/L	50.00	102	85-115
Selenium	101	5.0	ug/L	100.0	101	85-115
Silver	25.8	1.0	ug/L	25.00	103	85-115
Zinc	52.2	5.0	ug/L	50.00	104	85-115

Batch DL20508 - 245.1/7470A

Blank

Mercury	ND	0.2	ug/L
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LCS

Mercury	5.6	0.2	ug/L	6.000	93	85-115
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LCS Dup

Mercury	5.7	0.2	ug/L	6.000	94	85-115	1	20
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8100M Total Petroleum Hydrocarbons

Batch DL20702 - 3510C

Blank

Decane (C10)	ND	5.00	ug/L
Docosane (C22)	ND	5.00	ug/L
Dodecane (C12)	ND	5.00	ug/L
Eicosane (C20)	ND	5.00	ug/L



CERTIFICATE OF ANALYSIS

Client Name: Lockwood Remediation Technologies LLC
Client Project ID: 93 Bennington - RGP

ESS Laboratory Work Order: 22L0086

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8100M Total Petroleum Hydrocarbons

Batch DL20702 - 3510C

Hexacosane (C26)	ND	5.00	ug/L							
Hexadecane (C16)	ND	5.00	ug/L							
Hexatriacontane (C36)	ND	5.00	ug/L							
Nonadecane (C19)	ND	5.00	ug/L							
Nonane (C9)	ND	5.00	ug/L							
Octacosane (C28)	ND	5.00	ug/L							
Octadecane (C18)	ND	5.00	ug/L							
Tetracosane (C24)	ND	5.00	ug/L							
Tetradecane (C14)	ND	5.00	ug/L							
Total Petroleum Hydrocarbons (C9-C36)	ND	100	ug/L							
Triacontane (C30)	ND	5.00	ug/L							

Surrogate: O-Terphenyl

91.1

ug/L

100.0

91

40-140

LCS

Decane (C10)	35.1	5.00	ug/L	50.00	70	40-140
Docosane (C22)	39.5	5.00	ug/L	50.00	79	40-140
Dodecane (C12)	37.7	5.00	ug/L	50.00	75	40-140
Eicosane (C20)	40.3	5.00	ug/L	50.00	81	40-140
Hexacosane (C26)	40.3	5.00	ug/L	50.00	81	40-140
Hexadecane (C16)	39.5	5.00	ug/L	50.00	79	40-140
Hexatriacontane (C36)	41.4	5.00	ug/L	50.00	83	40-140
Nonadecane (C19)	37.5	5.00	ug/L	50.00	75	40-140
Nonane (C9)	30.8	5.00	ug/L	50.00	62	30-140
Octacosane (C28)	39.1	5.00	ug/L	50.00	78	40-140
Octadecane (C18)	39.3	5.00	ug/L	50.00	79	40-140
Tetracosane (C24)	36.1	5.00	ug/L	50.00	72	40-140
Tetradecane (C14)	38.6	5.00	ug/L	50.00	77	40-140
Total Petroleum Hydrocarbons (C9-C36)	542	100	ug/L	700.0	77	40-140
Triacontane (C30)	39.4	5.00	ug/L	50.00	79	40-140

Surrogate: O-Terphenyl

88.7

ug/L

100.0

89

40-140

LCS Dup

Decane (C10)	35.6	5.00	ug/L	50.00	71	40-140	2	25
Docosane (C22)	41.4	5.00	ug/L	50.00	83	40-140	5	25
Dodecane (C12)	38.5	5.00	ug/L	50.00	77	40-140	2	25
Eicosane (C20)	41.8	5.00	ug/L	50.00	84	40-140	4	25
Hexacosane (C26)	41.9	5.00	ug/L	50.00	84	40-140	4	25
Hexadecane (C16)	40.5	5.00	ug/L	50.00	81	40-140	2	25
Hexatriacontane (C36)	42.6	5.00	ug/L	50.00	85	40-140	3	25
Nonadecane (C19)	38.4	5.00	ug/L	50.00	77	40-140	2	25
Nonane (C9)	31.1	5.00	ug/L	50.00	62	30-140	1	25
Octacosane (C28)	40.8	5.00	ug/L	50.00	82	40-140	4	25
Octadecane (C18)	40.6	5.00	ug/L	50.00	81	40-140	3	25
Tetracosane (C24)	38.3	5.00	ug/L	50.00	77	40-140	6	25
Tetradecane (C14)	39.4	5.00	ug/L	50.00	79	40-140	2	25



CERTIFICATE OF ANALYSIS

Client Name: Lockwood Remediation Technologies LLC
Client Project ID: 93 Bennington - RGP

ESS Laboratory Work Order: 22L0086

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8100M Total Petroleum Hydrocarbons

Batch DL20702 - 3510C

Total Petroleum Hydrocarbons (C9-C36)	558	100	ug/L	700.0		80	40-140	3	25	
Triacotane (C30)	40.9	5.00	ug/L	50.00		82	40-140	4	25	
Surrogate: O-Terphenyl	89.5		ug/L	100.0		90	40-140			

Classical Chemistry

Batch DL20235 - General No Prep

Blank										
Turbidity	ND	1.0	NTU							
LCS										
Turbidity	4.2		NTU	4.000		104	90-110			

Batch DL20237 - General No Prep

Blank										
Total Residual Chlorine	ND	20.0	ug/L							
LCS										
Total Residual Chlorine	2.04		mg/L	2.030		100	85-115			

Batch DL20239 - General Preparation

Blank										
Nitrate/Nitrite as N	ND	0.020	mg/L							
LCS										
Nitrate/Nitrite as N	0.470		mg/L	0.5000		94	90-110			

Batch DL20533 - General Preparation

Blank										
Total Suspended Solids	ND	5	mg/L							
LCS										
Total Suspended Solids	88		mg/L	84.20		105	80-120			

Batch DL20612 - General Preparation

Blank										
Oil & Grease	ND	5.0	mg/L							
LCS										
Oil & Grease	32.8	5.0	mg/L	39.38		83	79-114			

Batch DL20613 - TCN Prep

Blank										
Total Cyanide	ND	5.00	ug/L							
LCS										
Total Cyanide	20.2	5.00	ug/L	20.06		101	90-110			
LCS										
Total Cyanide	149	5.00	ug/L	150.4		99	90-110			
LCS Dup										
Total Cyanide	150	5.00	ug/L	150.4		99	90-110	0.5	20	



CERTIFICATE OF ANALYSIS

Client Name: Lockwood Remediation Technologies LLC
Client Project ID: 93 Bennington - RGP

ESS Laboratory Work Order: 22L0086

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Classical Chemistry

Batch DL20622 - General Preparation

Blank

Total Kjeldahl Nitrogen as N	ND	0.20	mg/L							
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LCS

Total Kjeldahl Nitrogen as N	36.1	2.00	mg/L	34.70		104	80-120			
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Batch DL20635 - TPO4 Prep

Blank

Total Phosphate as P	ND	0.10	mg/L							
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LCS

Total Phosphate as P	0.50	0.10	mg/L	0.5000		100	90-110			
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Batch DL20637 - General Preparation

Blank

Chloride	ND	0.5	mg/L							
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LCS

Chloride	9.5		mg/L	10.00		95	90-110			
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Batch DL20726 - General Preparation

Blank

Total Dissolved Solids	ND	10	mg/L							
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LCS

Total Dissolved Solids	260		mg/L	260.0		100	80-120			
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CERTIFICATE OF ANALYSIS

Client Name: Lockwood Remediation Technologies LLC
Client Project ID: 93 Bennington - RGP

ESS Laboratory Work Order: 22L0086

Notes and Definitions

Z16a	Aqueous pH measured in water at 18.9 °C.
Z16	Aqueous pH measured in water at 18.7 °C.
U	Analyte included in the analysis, but not detected
HT	The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.
EL	Elevated Method Reporting Limits due to sample matrix (EL).
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Lockwood Remediation Technologies LLC
Client Project ID: 93 Bennington - RGP

ESS Laboratory Work Order: 22L0086

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meedc/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Lockwood Remediation Tech - AAK
 Shipped/Delivered Via: ESS Courier

ESS Project ID: 22L0086
 Date Received: 12/2/2022
 Project Due Date: 12/9/2022
 Days for Project: 5 Day

- | | |
|---|--|
| 1. Air bill manifest present? No
Air No.: <u>NA</u>
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
Temp: <u>0.8</u> Iced with: <u>Ice</u>
5. Was COC signed and dated by client? Yes | 6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. Were labs informed about short holds & rushes? Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

_____ |
|---|--|

- | | |
|--|--|
| 11. Any Subcontracting needed? Yes / No
ESS Sample IDs: _____
Analysis: _____
TAT: _____ | 12. Were VOAs received? Yes / No
a. Air bubbles in aqueous VOAs? Yes / No
b. Does methanol cover soil completely? Yes / No / NA |
|--|--|

13. Are the samples properly preserved? Yes / No
- a. If metals preserved upon receipt: Date: _____ Time: _____ By/Acid Lot#: _____
- b. Low Level VOA vials frozen: Date: _____ Time: _____ By: _____

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / ~~No~~
- a. Was there a need to contact the client? Yes / ~~No~~
- Who was contacted? _____ Date: _____ Time: _____ By: _____

Resolution: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	371908	Yes	N/A	Yes	1L Amber	H2SO4	
1	371909	Yes	N/A	Yes	1L Amber	H2SO4	
1	371910	Yes	N/A	Yes	1L Amber	H2SO4	
1	371911	Yes	N/A	Yes	1L Amber	H2SO4	
1	371914	Yes	N/A	Yes	1L Poly	NP	
1	371915	Yes	N/A	Yes	1L Poly	NP	
1	371916	Yes	N/A	Yes	1L Poly	NP	
1	371921	Yes	N/A	Yes	250 mL Poly	H2SO4	
1	371923	Yes	N/A	Yes	250 mL Poly	HNO3	
1	371924	Yes	N/A	Yes	250 mL Poly	HNO3	
1	371927	Yes	N/A	Yes	250 mL Poly	NaOH <i>phine</i>	
1	371929	Yes	N/A	Yes	250 mL Poly	NP	
1	371933	Yes	N/A	Yes	1L Poly	NP	
1	371934	Yes	N/A	Yes	250 mL Poly	NP	
1	371935	Yes	N/A	Yes	250 mL Poly	NP	
2	371912	Yes	N/A	Yes	1L Amber	H2SO4	
2	371913	Yes	N/A	Yes	1L Amber	H2SO4	

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Lockwood Remediation Tech - AAK

ESS Project ID: 22L0086

Date Received: 12/2/2022

2	371918	Yes	N/A	Yes	1L Poly	NP
2	371919	Yes	N/A	Yes	1L Poly	NP
2	371920	Yes	N/A	Yes	1L Poly	NP
2	371922	Yes	N/A	Yes	250 mL Poly	H2SO4
2	371925	Yes	N/A	Yes	250 mL Poly	HNO3
2	371926	Yes	N/A	Yes	250 mL Poly	HNO3
2	371932	Yes	N/A	Yes	250 mL Poly	NP

2nd Review

Were all containers scanned into storage/lab?

Are barcode labels on correct containers?

Are all Flashpoint stickers attached/container ID # circled?

Are all Hex Chrome stickers attached?

Are all QC stickers attached?

Are VOA stickers attached if bubbles noted?

Initials: 

Yes / No

Yes / No / NA

Yes / No / NA

Yes / No / NA

Yes / No / NA

Completed

By: 

Date & Time: 12/2/22 16:33

Reviewed

By: 

Date & Time: 12/2/22 16:56

DRAFT

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

Turn Time 5-Day Standard Rush _____ Approved By: _____

State where samples were collected: MA NH

Is this project for:

DRGP

Electronic Deliverable Yes X No
Format: Excel X Access PDF X Other

22L0086

Reporting Limits - Group 1 PAHs < 0.1 ug/L

Discharge into: Fresh Water X Salt Water

Project Manager: **Brian Caccavale**
 Company: **Lockwood Remediation Technologies, LLC**
 Address: **89 Crawford Street, Leominster, MA 01453**
 E-Mail: **plockwood@lrt-llc.net**
 bcaccavale@lrt-llc.net

Project # 2-2535

Project Name:
93 Bennington Street

PO # 2-2535

ESS Lab Sample ID	Date	Collection Time	Grab -G Composite-C	Matrix	Sample Identification	# of Containers	RGP N	Hardness	Total N	Chloride	Total C	Oil & G	Total D	TSS 25	TRC 45	Turbidity	Total P	TPH via	Coli	pH		
1	12/2/22	11:10	G	GW	Source Water	15 ¹⁶	X	X	X	X	X	X	X	X	X	X	X	X	X	X		1.2
2	12/2/22	11:50	G	SW	Receiving Water	8 ⁸	X	X			X	X	X	X		X				X		1.2
DRAFT																						

Preservation Code: 1-NP, 2-HCl, 3-H₂SO₄, 4-HNO₃, 5-NaOH, 6-MeOH, 7-Asorbic Acid, 8-ZnAct, 9-

Container Type: P-Poly G-Glass/AG-Amber Glass S-Sterile V-VOA

Matrix: S-Soil SD-Solid D-Sludge WW-Wastewater GW-Groundwater SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filter

Cooler Present	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
----------------	---	-----------------------------

Seals Intact Yes No NA:

Cooler Temperature: 0.8/

Sampled by: Chris Watt

Comments: 1) RGP Metals include Sb, As, Cd, Cr, Cu, Fe, Pb, Ni, Se, Ag and Zn by 200.7/3113B and Hg by 245.1
2) Parameters in **BOLD** have Short hold-time

pH (Field):

Source water: 7.12 S.V.

Flow Meter Start: N/A

Flow Meter End: N/A

Recent water: 7.55 S, V.

Relinquished by: (Signature) *Cheryl L. Whit*

Date/Time

Received by: (Signature)

Reinquished by: (Signature)

Date/Time _____

Received by: (Signature)

Relinquished by: (Signature)

Date/Time

Received by: (Signature)

Relinquished by: (Signature)

Date/Time

Received by: (Signature)

Please E-mail all changes to Chain of Custody in writing

Appendix F
City of Revere/MassDOT Correspondence
and Storm Sewer Map

Lockwood Remediation
Technologies LLC



From: [Nicholas Rystrom](#)
To: [Jake Jennings](#); [engineer](#)
Cc: [Brian Caccavale](#)
Subject: RE: [External] Storm Drain Plans / Maps
Date: Thursday, December 1, 2022 11:28:22 AM
Attachments: [image002.jpg](#)
[image003.jpg](#)

Hi Jake,

You CANNOT discharge to the sewer. Your only option is NPDES. You will need to speak to the State about infrastructure records since Bennington is a Mass DOT road

Nick

Nicholas J. Rystrom, P.E.

City Engineer



City of Revere

281 Broadway
Revere, MA 02151
781-286-8153 o
781-853-9600 c
nrystrom@revere.org

DRAFT

From: Jake Jennings <JJennings@lrt-llc.net>
Sent: Thursday, December 1, 2022 11:05 AM
To: [engineer](mailto:engineer@revere.org) <engineer@revere.org>
Cc: Brian Caccavale <bcaccavale@lrt-llc.net>
Subject: Storm Drain Plans / Maps

To Whom it may concern,

We are working on obtaining a discharge permit for a project located at 93 Bennington Street. We are unsure if we should apply for a NPDES DRGP permit – discharge to surface water or a MWRA permit– discharge to sewer. Would it be possible to send us a copy of the storm drain plans for the area around the site so we can determine which permit is required.

Please let me know if you have any questions.

Thank you,

Jake Jennings

Lockwood Remediation Technologies, LLC
89 Crawford Street
Leominster, MA 01453

M: 508-930-9812

www.lrt-llc.net



Check out our new website!

What solutions can we provide for you?

DRAFT



Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Jamey Tesler, Secretary of Transportation & CEO
Jonathan L. Gulliver, Highway Administrator



4-2021-0194

November 28, 2022

Andrew Tuccio
Sora Revere Owner LLC
1 Beacon Street
Boston, MA 02108
andrew@gansettventures.com

Re: Revere – #93 Bennington Street
Access Permit #4-2021-0194 – Amendment #1 – Temporary Intermittent Dewatering Operations

Dear Mr. Tuccio,

This is in response to the request to modify Access Permit #4-2021-0194 which was issued for the purpose of reconstructing two (2) cement concrete mixed-use driveway approaches, closing two (2) existing driveway approaches with VGC, reconstructing cement concrete sidewalks and entering the State Highway drainage system on Bennington Street.

The additional amendment work includes temporarily discharging treated groundwater effluent from #93 Bennington Street into two (2) existing catch basins located in the northwesterly side of the roadway at approximate stations, 7+00 and 8+43, respectively.

Please be advised that upon review, this permit is hereby amended provided that the Grantee adheres to all remaining terms of the original permit, the revised plans submitted and on file in the District Four Permit Office by Engineering Alliance, Inc. and the following conditions:

Prior to commencing work, the existing storm drain system to be used as the temporary discharge corridor shall be inspected via camera inspection and cleaned to remove all debris. All debris shall be disposed of outside the State Highway location line. A copy of the inspection shall be emailed to april.s.antonelli@dot.state.ma.us,

The Grantee shall remove any sediment caused by the proposed work.

The Grantee shall supply copies of all log data and analyses collected from treated effluent discharge to the District Economic Development Engineer at april.s.antonelli@dot.state.ma.us.

The District shall be contacted immediately with any emergency situations related to the groundwater discharge.

Any questions relative to this correspondence may be directed to April Antonelli, District Four Economic Development Engineer at april.s.antonelli@dot.state.ma.us.

ASA/asa

District 4, 519 Appleton Street Arlington, MA 02476
Tel: (857) 368-4000, FAX: (857) 368-0401
www.mass.gov/orgs/highway-division



Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Jamey Tesler, Secretary of Transportation & CEO
Jonathan L. Gulliver, Highway Administrator



4-2021-0194

Approved Signature

Paul Stedman by R.R.
District Highway Director

Date of Issued Amendment: November 28, 2022

Permit Expiration: Tuesday, August 15, 2023

DRAFT

Appendix G
Federal Correspondence

Lockwood Remediation
Technologies LLC



MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:

93 BENNINGTON STREET
93 BENNINGTON STREET REVERE, MA

NAD83 UTM Meters:

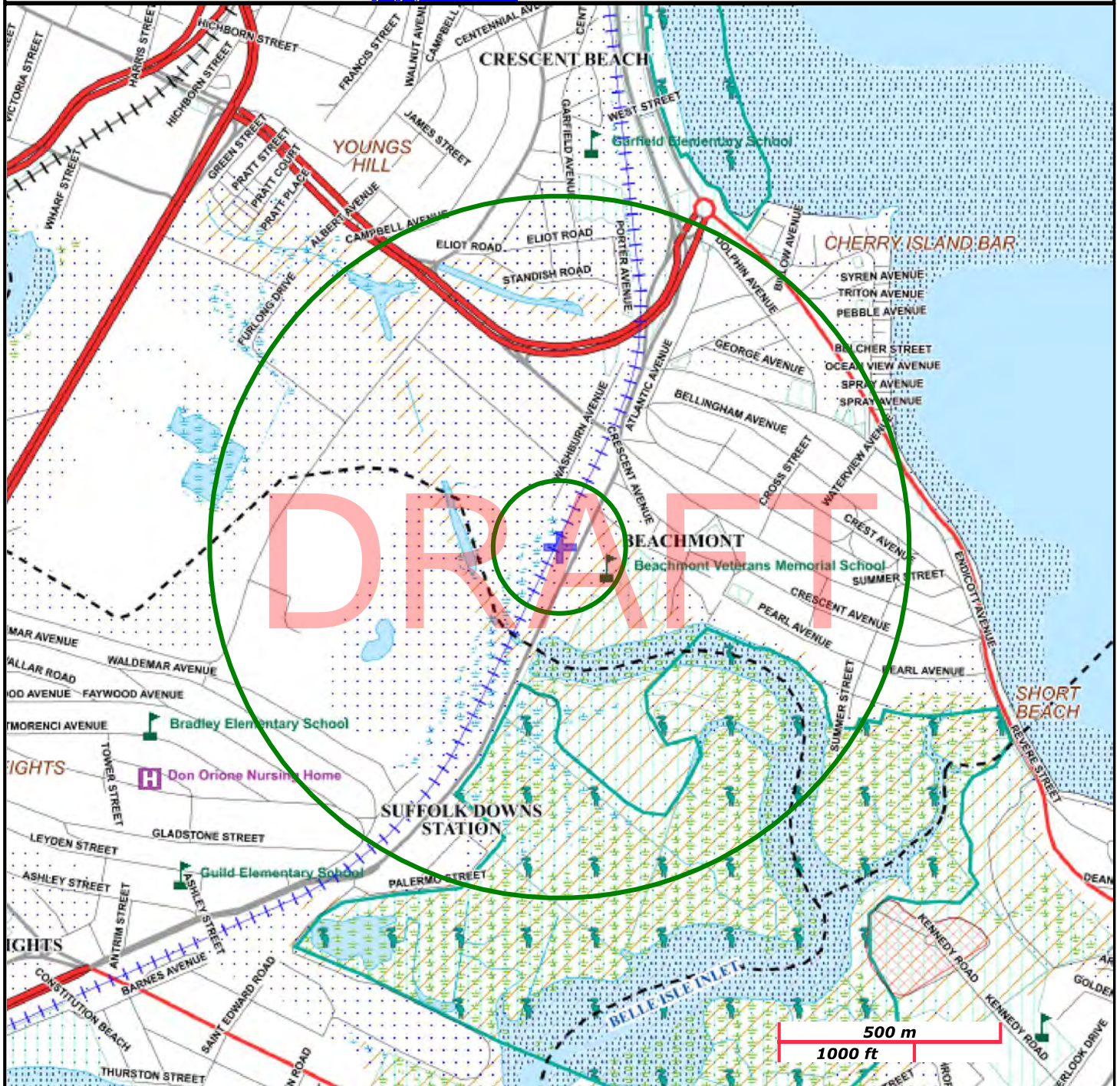
4695595mN, 335912mE (Zone: 19)
January 8, 2023

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at:
<https://www.mass.gov/orgs/massgis-bureau-of-geographic-information>



MassDEP

Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

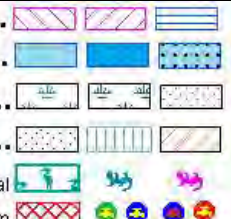
Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

NHESP Pri-Hab of Rare Species; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com. GW, SW, Emerg., Non-Com.





United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104



In Reply Refer To:
Project Code: 2023-0026731
Project Name: 93 Bennington Street

December 19, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.

About Official Species Lists

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

Endangered Species Act Project Review

Please visit the “**New England Field Office Endangered Species Project Review and Consultation**” website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

<https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review>

NOTE Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

Northern Long-eared Bat Update - Additionally, please note that on March 23, 2022, the Service published a proposal to reclassify the northern long-eared bat (NLEB) as endangered under the Endangered Species Act. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing determination for the NLEB by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 30, 2022). If your project may result in incidental take of NLEB after the new listing goes into effect this will first need to be addressed in an updated consultation that includes an Incidental Take Statement. If your project may require re-initiation of consultation, please contact our office for additional guidance.

Additional Info About Section 7 of the Act

Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/service/section-7-consultations>

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

Candidate species that appear on the enclosed species list have no current protections under the

ESA. The species' occurrence on an official species list does not convey a requirement to consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

Migratory Birds

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

<https://www.fws.gov/program/migratory-bird-permit>

<https://www.fws.gov/library/collections/bald-and-golden-eagle-management>

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

DRAFT

Project Summary

Project Code: 2023-0026731

Project Name: 93 Bennington Street

Project Type: New Constr - Above Ground

Project Description: New construction of a 7-story residential building with 114 units.
Commercial space and parking will be available on the ground floor level.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.39507365,-70.99368760420084,14z>



Counties: Suffolk County, Massachusetts

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

Birds

NAME	STATUS
Roseate Tern <i>Sterna dougallii dougallii</i> Population: Northeast U.S. nesting population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2083	Endangered

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency: Lockwood Remediation Technologies, LLC

Name: Brian Caccavale

Address: 89 Crawford Street

City: Leominster

State: MA

Zip: 01453

Email: bcaccavale@lrt-llc.net

Phone: 9787511265

DRAFT

EFH Mapper Report

EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

[Greater Atlantic Regional Office](#)

[Atlantic Highly Migratory Species Management Division](#)

Query Results

Degrees, Minutes, Seconds: Latitude = 42° 23' 43" N, Longitude = 71° 0' 23" W

Decimal Degrees: Latitude = 42.395, Longitude = -70.994

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.









***** WARNING *****

Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Atlantic Wolffish	ALL	New England	Amendment 14 to the Northeast Multispecies FMP
		Haddock	Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Flounder	Eggs Juvenile Larvae/Adult	New England	Amendment 14 to the Northeast Multispecies FMP
		Little Skate	Juvenile Adult	New England	Amendment 2 to the Northeast Skate Complex FMP
		Ocean Pout	Adult Eggs Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Atlantic Herring	Juvenile Adult Larvae	New England	Amendment 3 to the Atlantic Herring FMP

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Atlantic Cod	Larvae Adult Juvenile Eggs	New England	Amendment 14 to the Northeast Multispecies FMP
		Pollock	Juvenile Eggs Larvae	New England	Amendment 14 to the Northeast Multispecies FMP
		Red Hake	Adult Eggs/Larvae/Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Silver Hake	Eggs/Larvae Adult	New England	Amendment 14 to the Northeast Multispecies FMP
		Yellowtail Flounder	Adult Juvenile Larvae Eggs	New England	Amendment 14 to the Northeast Multispecies FMP
		White Hake	Larvae Adult Eggs Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Windowpane Flounder	Adult Larvae Eggs Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Skate	Adult Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
		American Plaice	Adult Juvenile Larvae Eggs	New England	Amendment 14 to the Northeast Multispecies FMP
		Thorny Skate	Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
		Northern Shortfin Squid	Adult	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Longfin Inshore Squid	Juvenile Adult	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Atlantic Mackerel	Eggs Larvae Juvenile Adult	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Bluefish	Adult Juvenile	Mid-Atlantic	Bluefish
		Atlantic Butterfish	Eggs Larvae Adult	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Spiny Dogfish	Sub-Adult Female Adult Male Adult Female	Mid-Atlantic	Amendment 3 to the Spiny Dogfish FMP
		Atlantic Surfclam	Juvenile Adult	Mid-Atlantic	Surfclam and Ocean Quahog
		Scup	Juvenile Adult	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
		Black Sea Bass	Adult	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass

Salmon EFH

No Pacific Salmon Essential Fish Habitat (EFH) were identified at the report location.

HAPCs

No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.

****For links to all EFH text descriptions see the complete data inventory: [open data inventory -->](#)**

All spatial data is currently available for the Mid-Atlantic and New England councils,

Secretarial EFH,

Bigeye Sand Tiger Shark,

Bigeye Sixgill Shark,

Caribbean Sharpnose Shark,

Galapagos Shark,

Narrowtooth Shark,

Sevengill Shark,

Sixgill Shark,

Smooth Hammerhead Shark,

Smalltail Shark



Documentation of the Results of the ESA Eligibility Determination:

The project located at 93 Bennington Street in Revere, MA is eligible for coverage under the general permit under Criterion C. This project is located in Suffolk County. No designated critical habitats were listed in the project area. An Endangered Species Consultation was conducted on the U.S. Fish & Wildlife Service New England Field Office ECOS IPaC webpage for the Site:

- The Northern Long-eared Bat *Myotis septentrionalis* was listed as “Endangered” wherever it is found;
- Roseate Tern *Sterna dougallii dougalli* was listed as “Endangered” wherever it is found; and

It is LRT’s opinion that temporary dewatering activities at the site will not impact these species based on the following:

- 1) Northern long-eared bats spend winter hibernating in caves and mines. They use areas in various sized caves or mines with constant temperatures, high humidity, and no air currents. During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees). There are no caves or mines located at the site. There are trees in the immediate vicinity of the site; however, tree removal is not part of the scope of work related to this NOI Intent. Therefore, temporary dewatering activities will have “no impact” to the Northern Long-eared Bat.
- 2) Roseate Terns habitats include coastal, salt bays, estuaries and ocean waters. They nest on sandy or rocky islands with some low land cover, close to shallow waters for feeding, especially in protected bays and estuaries. Roseate Terns forage in coastal waters and sometimes well offshore, with a seeming preference for warmer waters. Dewatering activities will take place on land away from the shoreline with dewatering discharge directed to an existing stormwater catch basin located inland along Bennington Street. Additionally, shoreline or ocean disturbance is not part of the project. Therefore, temporary dewatering activities will have “no impact” to Roseate Terns.

Appendix H
National Register of Historic Places
Suffolk County, Massachusetts

Lockwood Remediation
Technologies LLC



Reference Number	Property Name	Status	Request Type	Restricted Address	Category of Property	State	County	City	Street & Number	Federal Agencies	Listed Date	Name of Multiple Property Listing	NHL Designated Date	Other Names	Park Name
00000160	Fulton-Commercial Streets Historic District (Boundary Increase)	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	81-95 Richmond St.		3/12/2000				
00000415	Harvard Avenue Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Linden St., Commonwealth Ave., Harvard Ave., and Park Vale Ave.		4/28/2000			Allston Village Historic District	
00000871	Dearborn School	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	25 Ambrose St.		8/2/2000				
01000088	Brighton Center Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Academy Hill R., Chestnut Hill Ave., Dighton, Elko, Henshaw, Leicester, Market, Washington, and Winslip Sts.		2/20/2001				
01000304	Dorchester-Milton Lower Mills Industrial District (Boundary Increase)	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	378A-380 Washington St.		1/6/2001				
01000872	Peabody, The	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Roughly: Adams, River, Medway Sts., Millers Lane, Eliot and Adams Sts.		8/8/2001				
01001048	Gibson House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	105-197 Ashmont St.		8/7/2001				
01001557	Boston Consumptives Hospital	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	137 Beacon St.		2/7/2002		8/7/2001		Boston Sanatorium
02000081	Frances and Isabella Apartments	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	249 River St.		2/22/2002				
02000154	Greenwood Memorial United Methodist Church	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	430-432 and 434-436 Dudley St.		3/8/2002				
02000548	Bennington Street Burying Ground	Listed	Single	FALSE	SITE	MASSACHUSETTS	Suffolk	Boston	378A-380 Washington St.		5/2/2002			Highland Memorial Episcopal Church; Greenwood Memorial Church Bennington Street Cemetery	
02001039	Paine Furniture Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Bennington St., bet. Swift and harmony Sts.		9/12/2002				
02001190	Harrison Square Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	75-81 Arlington St.		10/22/2002				Clam Point Historic District
03000385	Savin Hill Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Bounded by MBTA Braintree line embankment, Park, Everett, Freeport, Mill, Asland, Blanche Sts., Victory Rd.		5/9/2003				
03000645	Union Oyster House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Savin Hill Ave., Morrissey Blvd., Dorchester Bay, and I-93		5/27/2003		5/27/2003	Atwood & Bacon; Atwood	
03000781	Publicity Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	41-43 Union Street		8/20/2003				
04000023	Benedict Fenwick School	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	40-44 Bromfield St.		2/11/2004				
04000085	Haskell, Edward H., Home for Nurses	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	150 Magnolia St.		2/26/2004			Sister Clara Muhammad School	
04000119	YWCA Boston	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	220 Fisher Ave., 63 Parker Hill Ave.		3/3/2004			New England Baptist Hospital Training School for Nurses	
04000189	Nix's Mate Daybeacon	Listed	Single	FALSE	STRUCTURE	MASSACHUSETTS	Suffolk	Boston	140 Clarendon St.	COAST GUARD	3/8/2004			Boston YWCA	
04000426	Nazing Court Apartments	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Nubble Channel, The Narrows, Boston Harbor		5/12/2004			Nix's Mate channel marker or day marker	
04000534	Hibernian Hall	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	224-236 Seaver St. and 1-8 Nazing Court		6/2/2004				
04000959	Fort Point Channel Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	182-186 Dudley St.		9/10/2004			Hibernian Building	
04001219	Forest Hills Cemetery	Listed	Single	FALSE	SITE	MASSACHUSETTS	Suffolk	Boston	Necco Court, Thomsson Place, A, Binford, Congress, Farnsworth, Melcher, Midway, Sleeper, Stillings, Summer Sts.		11/17/2004				
04001430	Truman Parkway-Metropolitan Park System of Greater Boston	Listed	Multiple	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	95 Forest Hills Ave.		1/5/2005	Metropolitan Park System of Greater Boston MPS			
04001432	VFW Parkway, Metropolitan Park System of Greater Boston	Listed	Multiple	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Truman Parkway		1/5/2005	Metropolitan Park System of Greater Boston MPS			
04001572	Morton Street, Metropolitan Park System of Greater Boston	Listed	Multiple	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	VFW Parkway, bet. Spring And Centre Sts.		1/24/2005	Metropolitan Park System of Greater Boston MPS			
04001573	Neponset Valley Parkway, Metropolitan Park System of Greater Boston	Listed	Multiple	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Morton St.		1/24/2005	Metropolitan Park System of Greater Boston MPS			
05000459	Ayer, Frederick, Mansion	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Neponset Valley Parkway		4/5/2005	Metropolitan Park System of Greater Boston MPS	4/5/2005		
05000559	Collins Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	395 Commonwealth Avenue		6/8/2005				
05000678	Home for Aged Couples	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	213-217 Washington St.		8/12/2005			Bowdoin Hall; Mt. Bowdoin Hall; New Washington Auditorium; Silver Manor	
05000936	South Boston Boat Clubs Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	409-419 Walnut Ave. and 2055 Columbus Ave.		9/1/2005			Elizabeth Carleton House	
05001509	Stony Brook Reservation Parkways, Metropolitan Park System of Great Boston MPS	Listed	Multiple	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	1793-1849 William J. Day Blvd.		1/3/2006	Metropolitan Park System of Greater Boston MPS			
06000127	East Boston High School, Old	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Dedham, Enneking, Turtle Pond Parkways, Smith Field, Reservation, W. Border Rds.		3/15/2006				
07000510	Goldsmith Block	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	127 Marion St.		6/5/2007			Joseph H. Barnes School	
07000861	Boston Transit Commission Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	41 Ruggles St., 746-750 Shawmut Ave.		8/2/2007			Ruggles-Shawmut Housing Boston School Committee Building	
08000089	Dorchester Park	Listed	Single	FALSE	SITE	MASSACHUSETTS	Suffolk	Boston	15 Beacon St.		2/20/2008				
08000693	Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	Listed	Multiple	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Bounded by Dorchester Ave., Richmond, Adams & Rivchview Sts.		7/24/2008	Metropolitan Park System of Greater Boston MPS			The Strandway, Columbia Road, Gardner Way
08000793	Joshua Bates School	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	William J. Day Blvd., Columbia Rd. between Farragut Rd and Kosciuszko Cir., Old Colony Ave. between Pacuska Ave.		8/22/2008				
08000795	Ohabei Shalom Cemetery	Listed	Single	FALSE	SITE	MASSACHUSETTS	Suffolk	Boston	731 Harrison Ave.		8/19/2008				
08001284	Compton Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	147 Wordsworth St.		12/12/2008				
09000612	Evergreen Cemetery	Listed	Single	FALSE	SITE	MASSACHUSETTS	Suffolk	Boston	150-161-175 Devonshire St., 18-20 Arch St.		8/14/2009				
09000717	Fairview Cemetery (Additional Documentation)	Listed	Single	FALSE	SITE	MASSACHUSETTS	Suffolk	Boston	2060 Commonwealth Ave.		9/16/2009				
09000767	Mount Hope Cemetery	Listed	Single	FALSE	Site	MASSACHUSETTS	Suffolk	Boston	45 Fairview Ave.		9/24/2009				
10000039	EDNA G. shipwreck (Eastern Rig dragger)	Listed	Multiple	TRUE	SITE	MASSACHUSETTS	Suffolk	Boston	355 Walk Hill St.		11/22/2010	Eastern Rig Dragger Fishing Vessel Shipwrecks in the Stellwagen Bank National Marine Sanctuary			STB009
10000300	Highland Spring Brewery Bottling and Storage Buildings	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Address Restricted		5/28/2010			Croh Brewery Bottling and Storage Building; Oliver Dilson & Company	
10000391	Second Church in Boston	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	154-166 Terrace St.		6/24/2010			Ruggles Baptist Church	
10000506	Charles River Reservation (Speedway)-Upper Basin Headquarters	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	874, 876, 880 Beacon St.		7/19/2010			Charles River Speedway Headquarters; Speedway Complex	
10001066	Egleston Substation	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	1420-1440 Soldiers Field Rd		12/27/2010			Boston Elevated Railway Substation	
11000160	United State Post Office, Courthouse, and Federal Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	3025 Washington St.		4/8/2011			John W. McCormack U.S. Post Office and Courthouse	
12000069	Fenway Park	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	5 Post Office Square	GENERAL SERVICES ADMINISTRATION	3/7/2012			JOHN B. SMITH BUILDING; JEAND BUILDING	
12000099	Terminal Storage Warehouse District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	14, & 2-4 Yawkey Way, 64-76 Brookline Ave., & 70-80 Lansdowne St.		3/12/2012				
12000783	Saint Mark's Episcopal Church	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	267-281 Medford St., 40 & 50 Terminal St.		7/3/2014			The Mission at Grove Hall; St. Mark's Mission; St. Mark's Chapel	
12000978	Sherman Apartments Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	73 Columbia Rd.		11/28/2012			Dorchester Academy	
12001012	Central Congregational Church	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	544-546 Washington, 4-6, 12-14, 18 Lyndhurst Sts.		10/16/2012		10/16/2012		
12001162	Commonwealth Pier Five	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	67 Newbury St.		10/10/2012			Commonwealth Pier	
13000621	Rosilinda Substation	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	165 Northern Ave.		8/27/2013			Boston Elevated Railway Company Substation	
13000928	Davidson, Sarah, Apartment Block	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	4228 Washington St.		12/18/2013				
13000929	Pilgrim Congregational Church	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	3 Gaylor St.		12/18/2013				
13000930	Walton and Roslin Halls	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	540-544 Columbia Rd.		12/18/2013			Pilgrim Trinitarian Congregational Church; Pilgrim Church	
14000272	Blake and Amory Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	702-708 & 710-726 Washington St., 3-5 Walton St.		6/22/2014			MHC# BOS.15942	
14000365	Dorchester South Burying Ground	Listed	Single	FALSE	SITE	MASSACHUSETTS	Suffolk	Boston	59 Temple Pl.		6/27/2014				
14000561	Buildings at 825-829 Blue Hill Avenue	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	2095 Dorchester Ave.		9/10/2014				
14000698	Almont Apartments	Listed	Single	TRUE	BUILDING	MASSACHUSETTS	Suffolk	Boston	825-829 Blue Hill Ave.		9/22/2014				
14000840	Home for Destitute Jewish Children	Listed	Single	TRUE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Address Restricted		10/8/2014			YMHA-Hecht House; Edward W Brooke Charter School	
14000974	Gridley Street Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Bounded by Congress, High, Pearl & Purchase Sts.		12/13/2014				
14000975	Lyman, Theodore, School	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	30 Gove St.		12/2/2014				
14010095	South End District (Boundary Increase)	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	200-224 Northampton St.		12/29/2014				
15000048	Boston Police Station Number One-Traffic Tunnel Administration Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	128, 150 North & 130-140 Richmond St.	NATIONAL PARK SERVICE	3/3/2015				
15000195	Boston National Historical Park	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Charlestown Navy Yard		5/5/2015				Boston
15000942	Fox, L.J., Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	407 Washington St.		12/29/2015				
16000409	Francis Street-Fenwood Road Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	407 Washington St.		6/23/2016				
16000454	Governor Shirley Square Historic District	Listed	Single	FALSE	district	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Huntington Ave., Francis, Vining & Fenwood Sts., St. Albans Rd.		7/18/2016				
16000050	Dorchester Heights National Historic Site	Listed	Single	FALSE	STRUCTURE	MASSACHUSETTS	Suffolk	Boston	Dudley, Hampden, Dunmore & Magazine Sts., Blue Hill & Mt. Pleasant Ave.	NATIONAL PARK SERVICE	10/15/1966				
66000127	Arnold Arboretum	Listed	Single	FALSE	SITE	MASSACHUSETTS	Suffolk	Boston	South Boston	NATIONAL PARK SERVICE	10/15/1966			Dorchester Heights	Boston
66000130	Beacon Hill Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	22 Divinity Ave.		1/12/1965		1/12/1965		
66000132	Boston Athenaeum	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Bounded by Beacon St., the Charles River Embankment, and Pinckney, Revere, and Hancock Sts.		10/15/1966		10/15/1966	See Also: Otis, (Second) Harrison Gray,House	
66000133	Boston Light	Listed	Multiple	FALSE	STRUCTURE	MASSACHUSETTS	Suffolk	Boston	10 1/2 Beacon St.	COAST GUARD	10/15/1966		1/29/1964	Boston Light Station	
66000134	Boston Naval Shipyard	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Little Brewster Island, Boston Harbor	NATIONAL PARK SERVICE	11/15/1966		1/29/1964	Charlestown Navy Yard	Boston
66000138	Bunker Hill Monument	Listed	Single	FALSE	STRUCTURE	MASSACHUSETTS	Suffolk	Boston	E of Chelsea St., Charlestown	NATIONAL PARK SERVICE	10/15/1966		1/20/1961		Boston
66000141	Brook Farm	Listed	Single	FALSE	SITE	MASSACHUSETTS	Suffolk	Boston	Breed's Hill		10/15/1966		7/25/1965		
66000366	Ether Dome, Massachusetts General Hospital	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	670 Baker St.		10/15/1966		11/13/1966	William Hickling Prescott House	
66000368	Faneuil Hall	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Fruit St.		10/15/1966		1/12/1965		
66000653	Garrison, William Lloyd, House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Dock Sq.	NATIONAL PARK SERVICE	10/15/1966		10/8/1960		Boston
66000764	Harding, Chester, House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	125 Highland St.		6/23/1965		10/15/1966	Rockledge;St. Monica's Home	
66000765	Headquarters House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	16 Beacon St.		10/15/1966		12/21/1965		
66000768	Long Wharf and Customhouse Block	Listed	Single	FALSE	STRUCTURE	MASSACHUSETTS	Suffolk	Boston	55 Beacon St.		10/15/1966		11/13/1966		
66000770	Massachusetts Historical Society Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Foot of State St.		10/15/1966		12/21/1965		
66000771	Massachusetts Statehouse	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	1154 Boylston St.		10/15/1966		12/19/1960		
66000776	Old North Church	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Beacon Hill	NATIONAL PARK SERVICE	10/15/1966		1/20/1961	Christ Church Episcopal	Boston
66000778	Old South Meetinghouse	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	193 Salem St.	NATIONAL PARK SERVICE	10/15/1966		1/20/1961		Boston
66000779	Old State House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Mt. and Washington Sts.	NATIONAL PARK SERVICE					

Reference Number	Property Name	Status	Request Type	Restricted Address	Category of Property	State	County	City	Street & Number	Federal Agencies	Listed Date	Name of Multiple Property Listing	NHL Designated Date	Other Names	Park Name
74000390	Park Street District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Tremont, Park, and Beacon Sts.		5/1/1974			See Also:Chester Harding House,Boston Athenaeum.	
74000391	John Adams Courthouse	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Pemberton Sq.		5/8/1974			Suffolk County Courthouse	
74000392	Winthrop Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	7 Water St.		4/18/1974			Carter Building	
74000393	Youth's Companion Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	209 Columbus Ave.		5/2/1974			Sawyer Building	
74000907	Phipps Street Burying Ground	Listed	Single	FALSE	SITE	MASSACHUSETTS	Suffolk	Boston	Phipps St.		5/14/1974				
74000911	Clapp Houses	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	199 and 195 Boston St.		5/2/1974			"Roger" Clapp House;William Clapp House	
74000915	Dorchester North Burying Ground	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Stroughton St. and Columbia Rd.		4/18/1974			First Burying Ground in Dorchester	
74000917	Pierce House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	24 Oakton Ave.		4/26/1974				
74002044	Howe, Samuel Gridley and Julia Ward, House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	13 Chestnut St.		9/13/1974		5/30/1974		
74002045	King's Chapel	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Tremont and School Sts.		5/2/1974		10/9/1960		
74002222	Boston National Historical Park	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Inner harbor at mouth of Charles River	NATIONAL PARK SERVICE	10/26/1974				Boston
74002350	Blake, James, House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	735 Columbia Rd.		5/1/1974				
75000299	South Station Headhouse	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Atlantic Ave. and Summer St.		2/13/1975			South Union Terminal	
75000300	St. Stephen's Church	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Hanover St. between Clark and Harris Sts.		4/14/1975			New North Church	
75000301	Symphony and Horticultural Halls	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Massachusetts and Huntington Aves.		5/30/1975				
76001979	Neel, William C., House	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	3 Smith Ct.		5/11/1976		5/11/1976		
77001541	Appleton, Nathan, Residence	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	39-40 Beacon St.		12/22/1977		12/22/1977	Appleton-Parker Houses;Women's City Club	
78000473	Fenway Studios	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	30 Ipswich St.		9/13/1978		8/5/1998		
79000368	Bedford Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	89-103 Bedford St.		8/21/1979				
79000369	International Trust Company Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	39-47 Milk St.		9/10/1979				
79000370	Washington Street Theatre District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	511-559 Washington St.		3/19/1979				
80000442	Wirth, Jacob, Buildings	Listed	Multiple	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	31-39 Stuart St.		12/9/1980	Boston Theatre MRA			
80000443	Wilbur Theatre	Listed	Multiple	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	244-250 Tremont St.		12/9/1980	Boston Theatre MRA		Ye Wilbur Theatre	
80000444	Shubert, Sam S., Theatre	Listed	Multiple	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	263-265 Tremont St.		12/9/1980	Boston Theatre MRA			
80000445	Metropolitan Theatre	Listed	Multiple	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	252-272 Tremont St.		12/9/1980	Boston Theatre MRA		Music Hall	
80000446	Hayden Building	Listed	Multiple	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	681-683 Washington St.		12/9/1980	Boston Theatre MRA			
80000448	Dill Building	Listed	Multiple	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	11-25 Stuart St.		12/9/1980	Boston Theatre MRA			
80000450	Boylston Building	Listed	Multiple	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	2-22 Boylston St.		12/9/1980	Boston Theatre MRA			
80000451	Boston Young Men's Christian Union	Listed	Multiple	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	48 Boylston St.		12/9/1980	Boston Theatre MRA			
80000453	Boston Edison Electric Illuminating Company	Listed	Multiple	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	25-39 Boylston St.		12/9/1980	Boston Theatre MRA			
80000455	West Street District	Listed	Multiple	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	West St.		12/9/1980	Boston Theatre MRA			
80000458	Piano Row District	Listed	Multiple	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Boston Common, Park Sq., Boylston Pl. and Tremont St.		12/9/1980	Boston Theatre MRA			
80000460	Liberty Tree District	Listed	Multiple	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Harrison Ave., Washington, Essex and Beach Sts.		12/9/1980	Boston Theatre MRA			
80000462	Beach-Knapp District	Listed	Multiple	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Harrison Ave., Washington, Kneeland, and Beach Sts.		12/9/1980	Boston Theatre MRA			
80000463	Russia Wharf Buildings	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	518-540 Atlantic Ave., 270 Congress St. and 276-290 Congress St.		12/2/1980				
80000465	Oak Square School	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	35 Nonantum St.		11/10/1980				
80000668	United Shoe Machinery Corporation Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	138-164 Federal St.		8/19/1980				
80000669	Union Wharf	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	295-353 Commercial St.		6/22/1980				
80000670	Suffolk County Jail	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	215 Charles St.		4/23/1980			Charles Street Jail	
80000671	Stearns, R. H., House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	140 Tremont St.		6/16/1980			Stearns,R.H.,Building	
80000672	New England Conservatory of Music	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	290 Huntington Ave.		5/14/1980		4/19/1994		
80000674	Garrison, William Lloyd, School	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	20 Hutchings St.		4/16/1980				
80000675	Dorchester-Milton Lower Mills Industrial District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Both sides of Neponset River		4/2/1980				
80000676	Charles Playhouse	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	74-78 Warenton St.		6/16/1980				
80000677	Berger Factory	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	37 Williams St.		4/9/1980				
80000678	All Saints' Church	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	211 Ashmont St.		6/16/1980				
80001683	Dillaway School	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	16-20 Kenilworth St.		4/9/1980				
80004396	Boston African American National Historic Site	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Museum of Afro American History, Dudley Station, Box 5	NATIONAL PARK SERVICE	10/10/1980				Boston African American National Historic Site
81000620	Fields Corner Municipal Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	1 Arcadia St., 195 Adams St.		11/12/1981				
82000486	Wigglesworth Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	89-83 Franklin St.		10/21/1982				
82000448	Roughsawn Hall	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	15-18 City Sq.		4/15/1982				
82004450	McKay, Donald, House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	78-80 White St.		6/2/1982				
82004453	Haffenreffer Brewery	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	Germania St.		5/2/1982				
82004456	Adams-Nervine Asylum	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	990-1020 Centre St.		6/1/1982			Adams Aboretum Condominiums	
83000601	Charles Street African Methodist Episcopal Church	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	551 Warren St.		9/1/1983			All Souls Unitarian Church	
83000602	Codman Square District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Norfolk, Talbot, Epping, Lithgow, Centre, and Moultrie Sts.		6/23/1983				
83000603	Gardner, Isabella Stewart, Museum	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	280 The Fenway		1/27/1983			Fenway Court	
83000604	Loring, Harrison, House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	789 E. Broadway St.		9/1/1983				
83000605	Harvard Avenue Fire Station	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	16 Harvard Ave.		3/11/1983				
83000606	Lawrence Model Lodging Houses	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	79, 89, 99 and 109 E. Canton St.		9/22/1983				
83000607	Newspaper Row	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	322-328 Washington St., 5-23 Milk St., and 11 Hawley St.		7/7/1983				
83004097	Codman Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	55 Kilby St.		10/19/1983			10 Liberty Square Building	
83004098	Leather District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Atlantic Ave., Kneeland, Lincoln, and Essex Sts.		12/21/1983				
83004099	LUNA (tugboat)	Listed	Single	FALSE	STRUCTURE	MASSACHUSETTS	Suffolk	Boston	NDC Pier, Charles River		10/6/1983				
83004285	Baker, Sarah J., School	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	33 Perin St.		7/7/1983		4/11/1989		
84000421	Vermont Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	42-12 Thatcher St.		11/13/1984				
84002875	Fenway-Boylston Street District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Fenway, Boylston, Westland, and Hemenway Sts.		9/4/1984			See Also:Massachusetts Historical Society	
84002890	Moreland Street Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Kearsarge, Blue Hill Aves., Warren, Waverly, and Winthrop Sts.		3/29/1984			Mount Pleasant;See Also:Sarah J. Baker School	
85000316	Bigelow School	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	350 W. 4th St.		2/21/1985				
85000317	Dimock Community Health Center Complex	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	41 and 55 Dimock St.		2/21/1985		7/17/1991	New England Hospital for Women and Children	
85000318	Dorchester Pottery Works	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	103-105 Victory Rd.		2/21/1985				
85002015	Building at 138-142 Portland Street	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	138-142 Portland St.		9/5/1985			85 Merrimac St.	
85003074	Dudley Station Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Washington, Warren, and Dudley Sts.		12/5/1985				
85003323	Boston Harbor Islands Archeological District	Listed	Single	TRUE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Address Restricted		12/21/1985				
85003375	Engine House No. 34	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	444 Western Ave.		10/24/1985			Western Avenue Fire Station	
86000084	USS CASSIN YOUNG (destroyer)	Listed	Single	FALSE	STRUCTURE	MASSACHUSETTS	Suffolk	Boston	Charlestown Navy Yard	DEPARTMENT OF THE NAVY	1/14/1986	DD-793			
86000140	Christ Church	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	1220 River Rd.		1/30/1986				
86000274	Buffinch Triangle Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Canal, Market, Merrimac, and Causeway Sts.		2/27/1986				
86000375	Harriswood Crescent	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	60-88 Harold St.		3/13/1986				
86001486	Sears' Crescent and Sears' Block	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	38-68 and 70-72 Cornhill		8/9/1986				
86001504	Richardson Block	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	113-151 Pearl and 109-119 High Sts.		8/9/1986				
86001909	Filem's Department Store	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	426 Washington St.		7/24/1986				
86001911	Locke-Ober Restaurant	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	3-4 Winter Pl.		7/24/1986				
86001913	Second Brazer Building	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	25-29 State St.		7/24/1986				
87000757	Harvard Stadium	Listed	Single	FALSE	STRUCTURE	MASSACHUSETTS	Suffolk	Boston	60 N. Harvard St.		2/27/1987		2/27/1987		
87000760	Boston Common	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Beacon, Park, Tremont, Boylston, and Charles Sts.		2/27/1987		2/27/1987	See Also:Boston Common and Public Garden	
87000761	Boston Public Garden	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Beacon, Charles, Boylston, and Arlington Sts.		2/27/1987		2/27/1987	See Also:Boston Common and Public Garden	
87000885	Abbotsford	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	300 Walnut Ave.		9/16/1987			Museum of the National Center of Afro-American Artists	
87001128	Monument Square Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Monument Sq.		6/2/1987			See Also: Bunker Hill Monument	
87001394	New Riding Club	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	52 Hemenway St.		8/20/1987				
87001396	Congress Street Fire Station	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	344 Congress St.		9/3/1987				
87001398	House at 17 Cranston Street	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	17 Cranston St.		11/20/1987			Boston Fire Museum	
87001399	Hoxie, Timothy, House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	135 Hillside St.		11/20/1987				
87001478	Austin, Francis B., House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	58 High St.		10/21/1988				
87001481	Long Island Head Light	Listed	Multiple	FALSE	STRUCTURE	MASSACHUSETTS	Suffolk	Boston	Long Island	COAST GUARD	6/15/1987	Lighthouses of Massachusetts TR			
87001495	Saint Augustine Chapel and Cemetery	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Dorchester St. between W. Sixth and Tudor Sts.		9/18/1987				
87001771	Bunker														

Reference Number	Property Name	Status	Request Type	Restricted Address	Category of Property	State	County	City	Street & Number	Federal Agencies	Listed Date	Name of Multiple Property Listing	NHL Designated Date	Other Names	Park Name
97001472	St. Luke's and St. Margaret's Church	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	5-7 St. Luke's Rd.		11/12/1997			St. Luke's Church	
98000149	Eagle Hill Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Border, Lexington, Trenton, and Falcon Sts.		2/26/1998				
98001082	Boston Young Men's Christian Association	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	312-320 Huntington Ave.		8/20/1998			YMCA of Greater Boston;Central Branch;Huntington Ave. YMCA	
98001292	St. Mary's Episcopal Church	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	14-16 Cushing Ave.		10/30/1998				
98001330	Rosindale Baptist Church	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	52 Cummins Pkwy.		11/5/1998				
98001361	Cathedral of St. George Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	517-523-525 E. Broadway		11/25/1998			Hawes Unitarian Church	
98001381	Baker Congregational Church	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	760 Saratoga St.		11/19/1998			Baker Maverick Congregational Church;Grace Church Federated	
99000593	Woodbourne Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Walk Hill, Goodway, and Wachusett Sts.		6/4/1999				
99000633	Symphony Hall	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	301 Massachusetts Avenue		1/20/1999		1/20/1999	See also-Symphony and Horticulture Halls 75000301	
99001302	Mariner's House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	11 North Square		11/12/1999				
99001304	Congregation Adath Jeshurun	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	397 Blue Hill Ave.		11/12/1999			First Haitian Baptist Church	
99001308	First Congregational Church of Hyde Park	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Boston	6 Webster St.		11/12/1999				
99001614	Church Green Buildings Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Boston	101-113 Summer St.		12/30/1999				
100001314	Boston Fish Pier Historic District	Listed	Single	FALSE	district	MASSACHUSETTS	Suffolk	Boston	212-234 Northern Ave.		7/13/2017			Commonwealth Pier No. 6	
100001315	Columbia Road-Devon Street Historic District	Listed	Single	FALSE	district	MASSACHUSETTS	Suffolk	Boston	193-231 (odd) & 200-204 (even) Columbia Rd.		7/17/2017				
100001458	Quincy Grammar School	Listed	Multiple	FALSE	building	MASSACHUSETTS	Suffolk	Boston	building		8/1/2017	Chinese Immigrants and Chinese Americans in the City of Boston MPS			
100001582	Columbia Road-Bellevue Street Historic District	Listed	Single	FALSE	district	MASSACHUSETTS	Suffolk	Boston	400-500 blk. of Columbia Rd., portions of Bellevue St.		9/8/2017				
100002734	Columbia Road-Strathcona Road Historic District	Listed	Single	FALSE	district	MASSACHUSETTS	Suffolk	Boston	90-94,102-108, 105-111, 129-135, 137, 143-147, 150-156 Columbia & 16 Strathcona Rds., 114-126 Washington St.		8/3/2018				
100002790	Benjamin Silverman Apartments	Listed	Single	FALSE	building	MASSACHUSETTS	Suffolk	Boston	50-52 Lorne & 4 Wilson Sts.		8/24/2018				
100003070	Esmond Street Historic District	Listed	Single	FALSE	district	MASSACHUSETTS	Suffolk	Boston	Bicknell, Bradshaw, Esmond, & Harvard Sts.		11/5/2018				
100003470	Intervale Street-Columbia Road Historic District	Listed	Single	FALSE	district	MASSACHUSETTS	Suffolk	Boston	117-121, 123-127, 129-135, 137-143, 145-159, 161, 162 Intervale St. & 282-284, 286-288 Columbia Rd.		2/28/2019				
100003471	Samuel Edelman Apartments	Listed	Single	FALSE	building	MASSACHUSETTS	Suffolk	Boston	97-103 Norfolk St.		3/5/2019				
100003942	Nathan Warnick Apartments	Listed	Resubmission	FALSE	building	MASSACHUSETTS	Suffolk	Boston	57 Bicknell St.		12/23/2019				
100004335	Ascension-Caproni Historic District	Listed	Resubmission	FALSE	district	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Washington St., Newcomb St, Thorndike St. & Reed St.		12/23/2019				
100005089	Fowler-Clark-Epstein Farmstead	Listed	Single	FALSE	building	MASSACHUSETTS	Suffolk	Boston	487 Norfolk St.		3/26/2020			Clark Farm	
100005274	Theodore Parker Unitarian Universalist Church	Listed	Resubmission	FALSE	building	MASSACHUSETTS	Suffolk	Boston	1859 Centre St.		6/29/2020			First Parish Church of West Roxbury	
100005455	Malcolm X-Ella Little Collins House	Listed	Resubmission	FALSE	building	MASSACHUSETTS	Suffolk	Boston	72 Dale St.		2/12/2021			Frederic W. Dorr House	
100005763	Cartoof & Sherman Apartments	Listed	Single	FALSE	building	MASSACHUSETTS	Suffolk	Boston	31-35 Wales St.		11/12/2020				
100005782	Thane Street Historic District	Listed	Single	FALSE	district	MASSACHUSETTS	Suffolk	Boston	70-78 Harvard St, 22-24, 26-28, 30-32 Thane St		11/13/2020				
100005783	Intervale Street-Blue Hill Avenue Historic District	Listed	Single	FALSE	district	MASSACHUSETTS	Suffolk	Boston	Blue Hill Ave. and Intervale St.		11/13/2020				
100005798	Crawford Street Historic District	Listed	Single	FALSE	district	MASSACHUSETTS	Suffolk	Boston	5-38 Crawford St., 42 Elm Hill Ave., 621 Warren St.		11/18/2020				
100006078	Elm Hill Park Historic District	Listed	Single	FALSE	district	MASSACHUSETTS	Suffolk	Boston	2-38 Elm Hill Park, 538-570 Warren St.		2/1/2021			Chisholm Park	
100006127	Lawrence Avenue Historic District	Listed	Single	FALSE	district	MASSACHUSETTS	Suffolk	Boston	Blue Hill Ave., Lawrence Ave., Coleus Park, Magnolia St., and Intervale St.		2/11/2021				
100006134	Greenville Street Historic District	Listed	Single	FALSE	district	MASSACHUSETTS	Suffolk	Boston	2, 6-25 Greenville St.		2/11/2021				
100007130	John F. Kennedy Federal Building	Listed	Single	FALSE	building	MASSACHUSETTS	Suffolk	Boston	15 New Sudbury St.	GENERAL SERVICES ADMINISTRATION	11/15/2021			JFK Federal Building	
100007147	Humboldt Avenue Historic District	Listed	Single	FALSE	building	MASSACHUSETTS	Suffolk	Boston	249, 257, 259 Humboldt Ave. and 79-83, 94 Hutchings St.		11/22/2021				
85002339	Hoosac Stores 1 & 2-Hoosac Stores 3	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Charlestown	25 and 115 Water St.	NATIONAL PARK SERVICE	8/4/1985				Boston
01000089	Chelsea Garden Cemetery	Listed	Single	FALSE	SITE	MASSACHUSETTS	Suffolk	Chelsea	70 Central Ave. (formerly Shawmut St.)		2/9/2001				
09000144	Chelsea Square Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Chelsea	Roughly area around Broadway, Medford, Tremont, Park, Cross and Winnisimmet Sts.		4/8/1982			Broay Square; Winnisimmet Square	
73000851	Naval Hospital Boston Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Chelsea	1 Broadway	DEPARTMENT OF THE NAVY	8/4/1973				
74000908	Bellingham-Cary House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Chelsea	34 Parker St.		9/6/1974				
82004464	Kimball, C. Henry, House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Chelsea	295 Washington St.		4/15/1982				
85000030	Bellingham Square Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Chelsea	Roughly bounded by Broadway, Shawmut, Chestnut, and Shurtleff Sts.	U.S. POSTAL SERVICE	1/3/1985				
88000718	Downtown Chelsea Residential Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Chelsea	Roughly bounded by Shurtleff, Marginal, and Division Sts. and Bellingham Sq.		6/22/1988				
93000283	Congregation Agudath Shalom	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Chelsea	145 Walnut St.		4/6/1993			Walnut Street Synagogue	
01001198	Dorchester Heights Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Dorchester	Roughly a one block area surrounding Telegraph Hill		11/1/2001			Telegraph Hill	
76002003	Trotter, William Monroe, House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Dorchester	97 Sawyer Ave.		5/11/1976		5/11/1976		
92001874	Richards, Ellen H. Swallow, House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Jamaica Plain	32 Eliot St.		3/31/1992		3/31/1992		
01001559	Immaculate Conception Rectory	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Revere	108 Beach St.		2/11/2002		5/27/2003		
03000642	Revere Beach Reservation	Listed	Single	FALSE	SITE	MASSACHUSETTS	Suffolk	Revere	Revere Beach Boulevard, Eliot Circle to Northern Circle		5/27/2003	Metropolitan Park System of Greater Boston MPS			
03001471	Winthrop Parkway, Metropolitan Parkway System of Greater Boston	Listed	Multiple	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Revere	Winthrop Parkway		1/21/2004				
04000025	Rumney Marsh Burying Ground	Listed	Single	FALSE	SITE	MASSACHUSETTS	Suffolk	Revere	Butler St. at Elm and Bixby Sts.		2/11/2004				
09000709	Slade Spice Mill	Listed	Single	FALSE	STRUCTURE	MASSACHUSETTS	Suffolk	Revere	770 Revere Beach Parkway		6/30/1972				
12000070	Revere City Hall and Police Station	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Revere	281 Broadway & 23 Pleasant St.		3/7/2012			Revere Town Hall	
82000485	Ronan, Mary, T., School	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Revere	154 Bradstreet Ave.		12/10/1982			Bradstreet Avenue School	
84000430	Church of Christ	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Revere	365 Beach St.		11/13/1984			Revere Masonic Temple	
98000871	Revere Beach Reservation Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Revere	Roughly bounded by Eliot Circle, Revere Beach Blvd., Northern Circle, and Atlantic Ocean		7/15/1998				
91000925	Rosindale Congregational Church	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Rosindale	25 Cummins Hwy., at Jct. with Summer Ave.		7/26/1991				
66000787	Shirley-Eustis House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Roxbury	31-37 Shirley St.		10/15/1966		10/9/1960		
86001378	US Post Office Garage	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	South Boston	135 A St.	U.S. POSTAL SERVICE	6/26/1986			Vehicle Maintenance Facility	
87001401	Westerly Burial Ground	Listed	Single	FALSE	SITE	MASSACHUSETTS	Suffolk	West Roxbury	Centre St.		11/20/1987			Centre Street Burial Ground	
03001469	Winthrop Shore Dr., Metropolitan Park System of Greater Boston	Listed	Multiple	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Winthrop	Winthrop Shore Dr.		1/21/2004	Metropolitan Park System of Greater Boston MPS			
07000144	Fort Banks Mortar Battery	Listed	Single	FALSE	SITE	MASSACHUSETTS	Suffolk	Winthrop	Kennedy Dr.		3/12/2007			Fort Banks	
10000098	Winthrop Center/Metcalf Square Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Suffolk	Winthrop	roughly bounded by Lincoln, Winthrop Sts., Winthrop Cemetery, Buchanan, Fremont, Pauline, Hermon and Belcher Sts.		3/23/2010			Columbia Square	
14000063	Highland School	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Winthrop	36 Grovers Ave.		3/18/2014			Arthur W. Dalrymple School	
90000162	Winthrop, Deane, House	Listed	Multiple	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Winthrop	34 Shirley St. (formerly 40 Shirley St.)		3/9/1990	First Period Buildings of Eastern Massachusetts TR			
97000878	Newton, Edward B., School	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Suffolk	Winthrop	131 Pauline St. (formerly 45 Pauline St.)		8/18/1997			"The E.B. Newton"	



Documentation of the National Historic Preservation Act Eligibility Determination:

As part of this permit, a determination was made as to whether there were any historic properties or places listed on the national register in the path of the discharge or in the vicinity of the construction of treatment systems or BMPs related to the discharge. A search on the Massachusetts Cultural Resource Information System (MACRIS) Database and the National Register of Historic Places did not list any potential historic properties on or near the project site in the databases. Therefore, the proposed discharge will not have the potential to cause effects on historical properties.

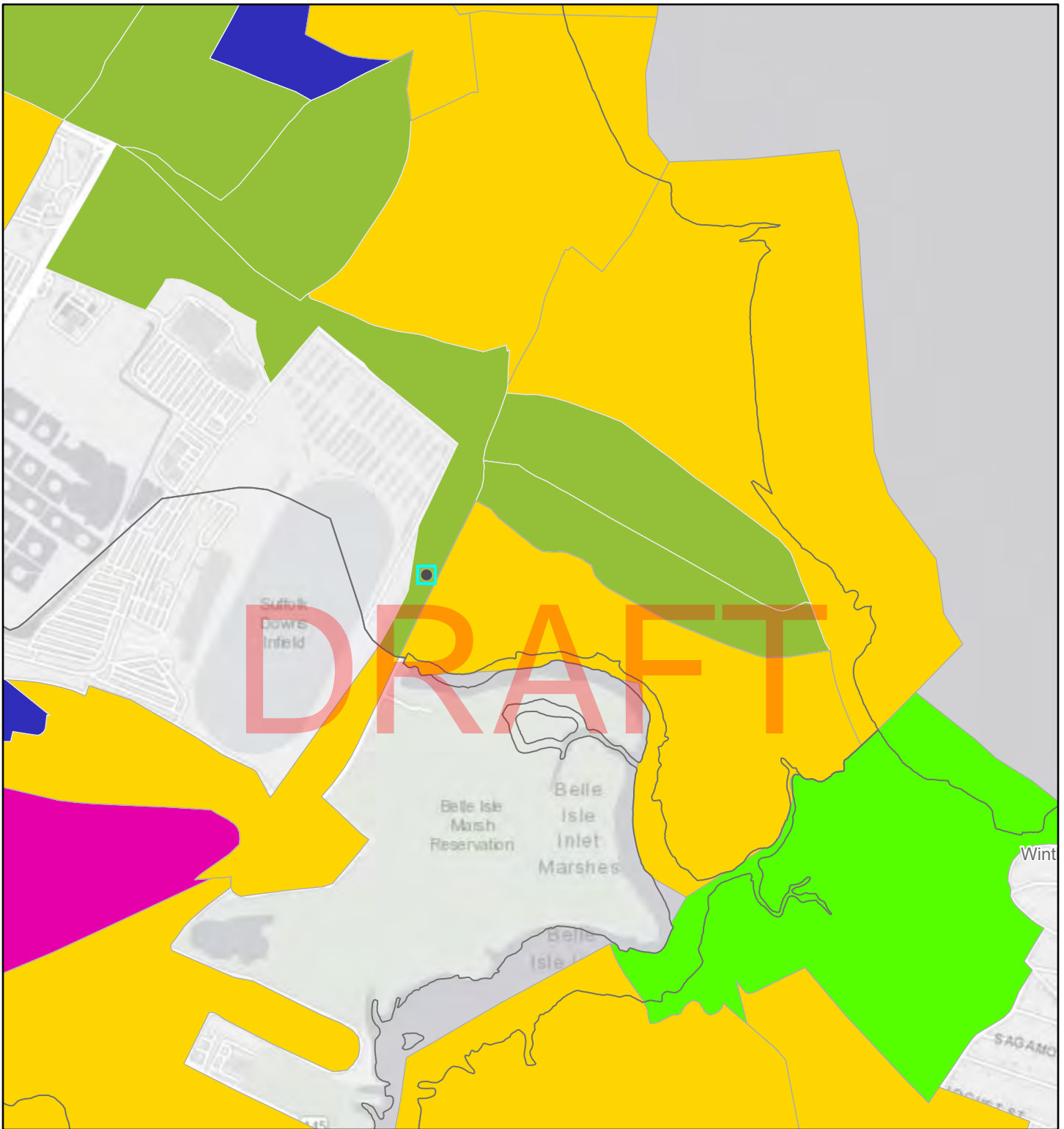
DRAFT

Appendix I
Environmental Justice Population Map

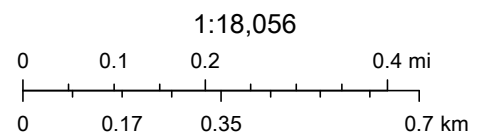
Lockwood Remediation
Technologies LLC



2020 Environmental Justice Neighborhoods



1/9/2023, 2:31:13 PM

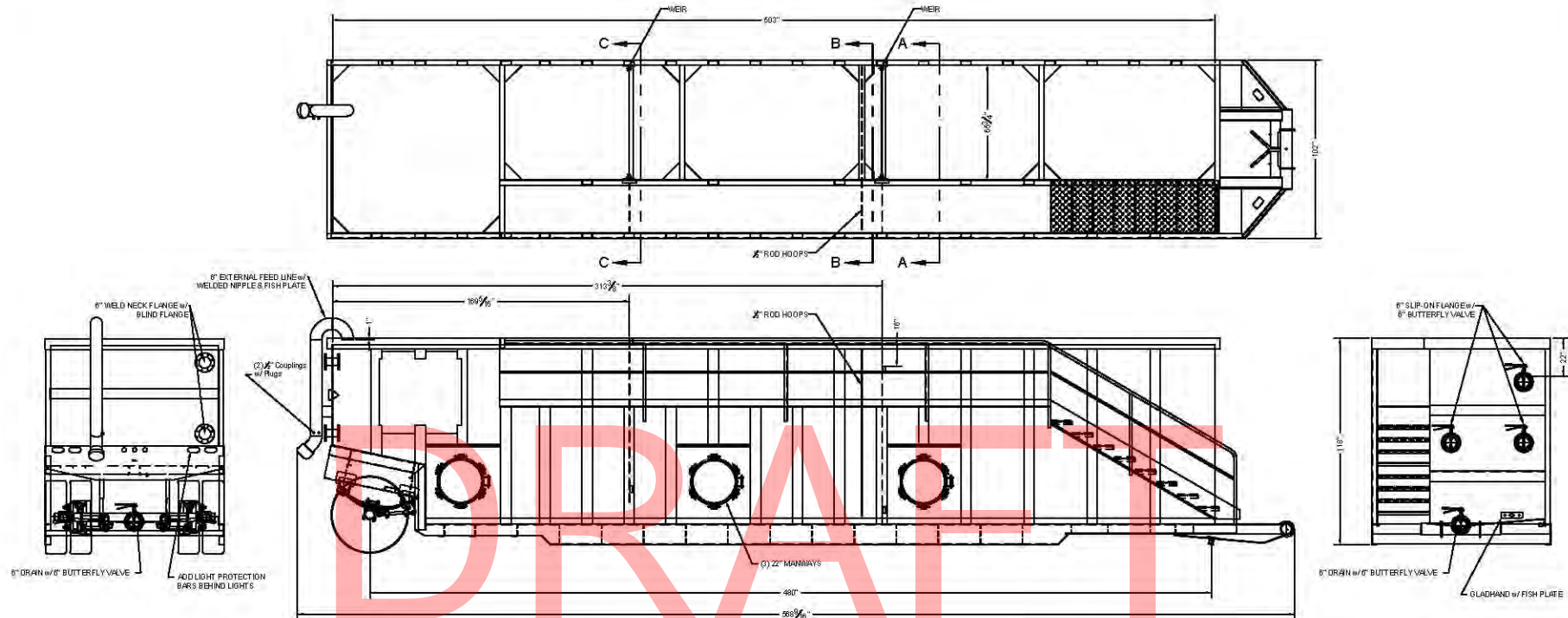


City of Boston, MassGIS, Esri, HERE, Garmin, GeoTechnologies, Inc.,
USGS, EPA

Appendix J
Water Treatment System Cutsheets

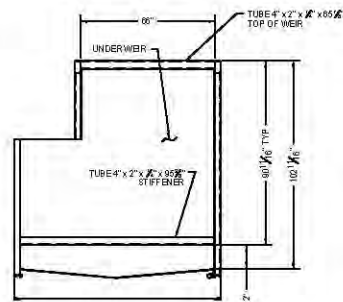
Lockwood Remediation
Technologies LLC



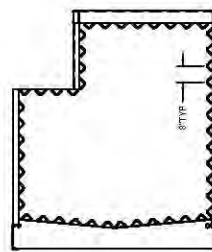


STANDARD SPECIFICATION

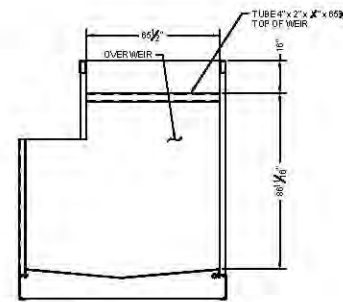
CAPACITY: ... 18,480 GALLONS (440 BBL)
 SIDE SHEETS: ... 1/4" A36 PLATE
 FRONT SHEET: ... 1/4" A36 PLATE
 REAR SHEET: ... 1/4" A36 PLATE
 FLOOR: ... 1/4" A36 PLATE
 MAIN FLOOR RAILS: ... 12" x 20.7# STRUCTURAL CHANNEL
 FLOOR CROSSMEMBERS: ... 1/4" A36 PLATE
 SIDE STAKES: ... ONE PIECE 3/16" A36 PLATE
 SUSPENSION: ... 3 LEAF SPRING, 22,500 LBS. CAPACITY
 AXLE: ... 77.5" TRACK, 22,500 LBS. CAPACITY
 TIRES: ... 11R22.5 RADIAL
 WHEELS: ... 8.25 x 22.5 STEEL
 MANWAYS: ... 3 - 22" DIA. CURB SIDE
 VALVES: ... 3 - 6" BUTTERFLY VALVE (FRONT)
 1 - 6" DRAIN BUTTERFLY VALVE (FRONT)
 1 - 6" DRAIN BUTTERFLY VALVE (REAR)
 2 - 6" BLIND FLANGE CONNECTION (REAR)
 INLET PIPING: ... 1 - 6" PIPE SYSTEM (REAR)



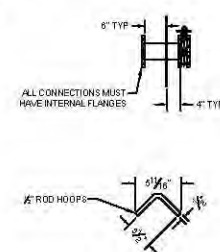
SECTION VIEW "C-C"



SECTION VIEW "B-B"



SECTION VIEW "A-A"



NOTE:
 This drawing is a representation baseline for this model of tank. Variations between this drawing and the actual equipment do exist, primarily with appurtenance locations, sizes and quantities.

18,000 gal. Weir Tank



Lockwood Remediation Technologies, LLC

89 Crawford Street
 Leominster, Massachusetts 01453
 O: 774-450-7177
 F: 888-835-0617

Electric Motor Driven

Submersible Pump

Models S3B1-E6 and S3B1

Size 3"



PUMP SPECIFICATIONS

Suction Head: Aluminum Alloy 356-T6 With Bonded Nitrile Lining;

Maximum Operating Pressure 50 psi (345 kPa).*

Impeller: Ductile Iron 65-45-12.

Seal Plate: Aluminum Alloy 356-T6 With Bonded Nitrile Lining.

Intermediate: Aluminum Alloy 356-T6.

Motor Housing: Aluminum Alloy 356-T6.

Motor Shaft: Stainless Steel 416.

Bearings: Upper, Open Single Row Ball Bearing.

Lower, Two Shield, Double Row Ball Bearing.

Shaft Sleeve: Stainless Steel 304.

Discharge Flange: Aluminum Alloy 356-T6.

Gaskets: Cork with Nitrile Binder (NC710).

O-Rings: Buna-N.

Wetted Hardware: Standard Plated Steel and Stainless Steel.

Strainer: Urethane Coated Steel. 51% Open Area,
0.375" (9.5 mm) Diameter Openings.

Hoisting Bail: Urethane Coated Steel.

Standard Equipment

NEMA Type 3R Rainproof Control Box. (See Section 130, Pages 80 and 85.)

Provides On-Off, Circuit Breaker and Motor Overload Protection.

Optional Equipment

Liquid Level Control: (See Sec. 130, Page 150.)

a. Turtle Type Pressure Activated Level Switch.

b. Float Activated Level Switch.

Staging Adapter Kit.

MOTOR/CABLE SPECIFICATIONS

Motor: Oil Filled Enclosure; 6.0 H.P.; 3450 R.P.M.

Single Phase: 230 Volt, 60 Hz, 34 Full Load AMPS, 7.2 kW (Max.)

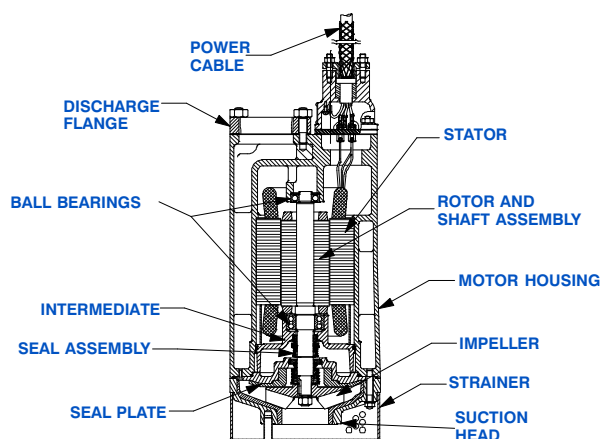
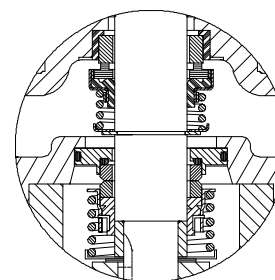
Three Phase: 200/230/460/575 Volt, 60 Hz, 26.5/23/11.5/9.2

Full Load AMPS, 6.8 kW (Max.)

Power Cable: 4 Wire; Type SO/SOW/SOOW; 10 AWG; 3 Power Conductors,
Plus 1 Ground. Nominal Length 50 Feet (15 m). Standard.
(Specify Alternate Length at Time of Order.)

Recommended Generator Size: 15 kW Across the Line Start.

*Consult Factory for Applications Exceeding Maximum
Pressure and/or Temperature Indicated.



SEAL SPECIFICATIONS

Tandem, Oil Lubricated.

Upper Seal: Type 21, Mechanical. Carbon Rotating Face.
Ni-Resist Stationary Face. Buna-N Elastomers.
Stainless Steel 18-8 Cage and Spring.

Lower Seal: Type 2, Mechanical. Tungsten Titanium
Carbide Rotating and Stationary Faces. Stainless
Steel 316 Stationary Seat. Fluorocarbon
Elastomers (DuPont Viton® or Equivalent). Stainless
Steel 303/304 Cage and Spring.

Maximum Temperature of Liquid Pumped, 122°F (50°C).*



GORMAN-RUPP PUMPS

www.grpumps.com

Specifications Subject to Change Without Notice

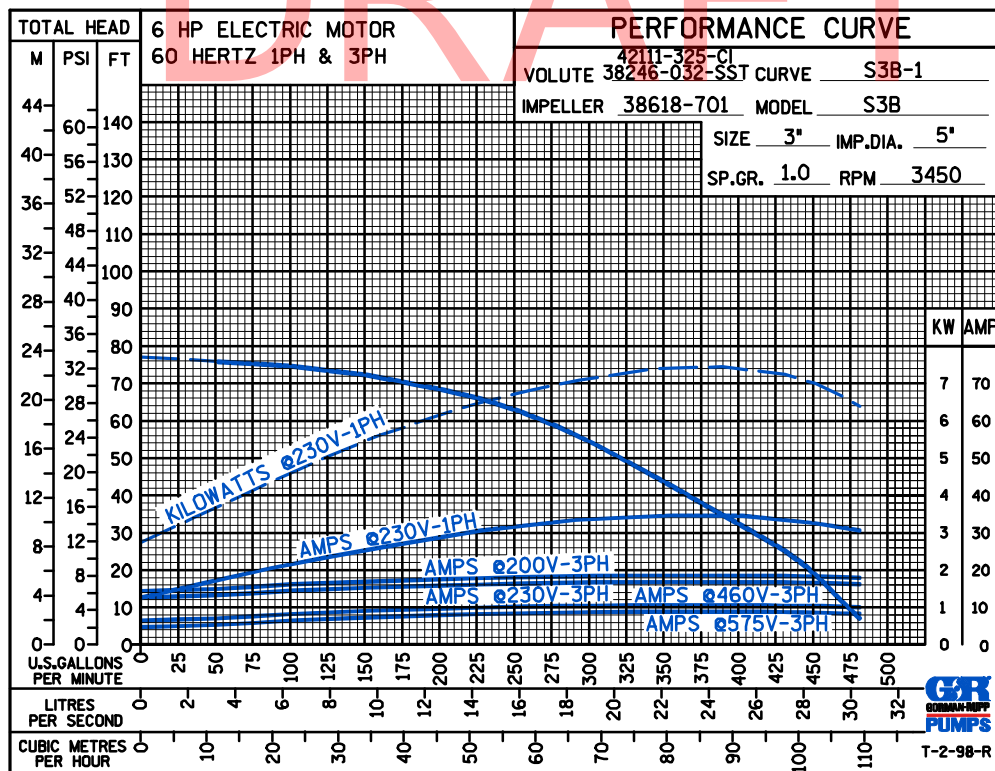
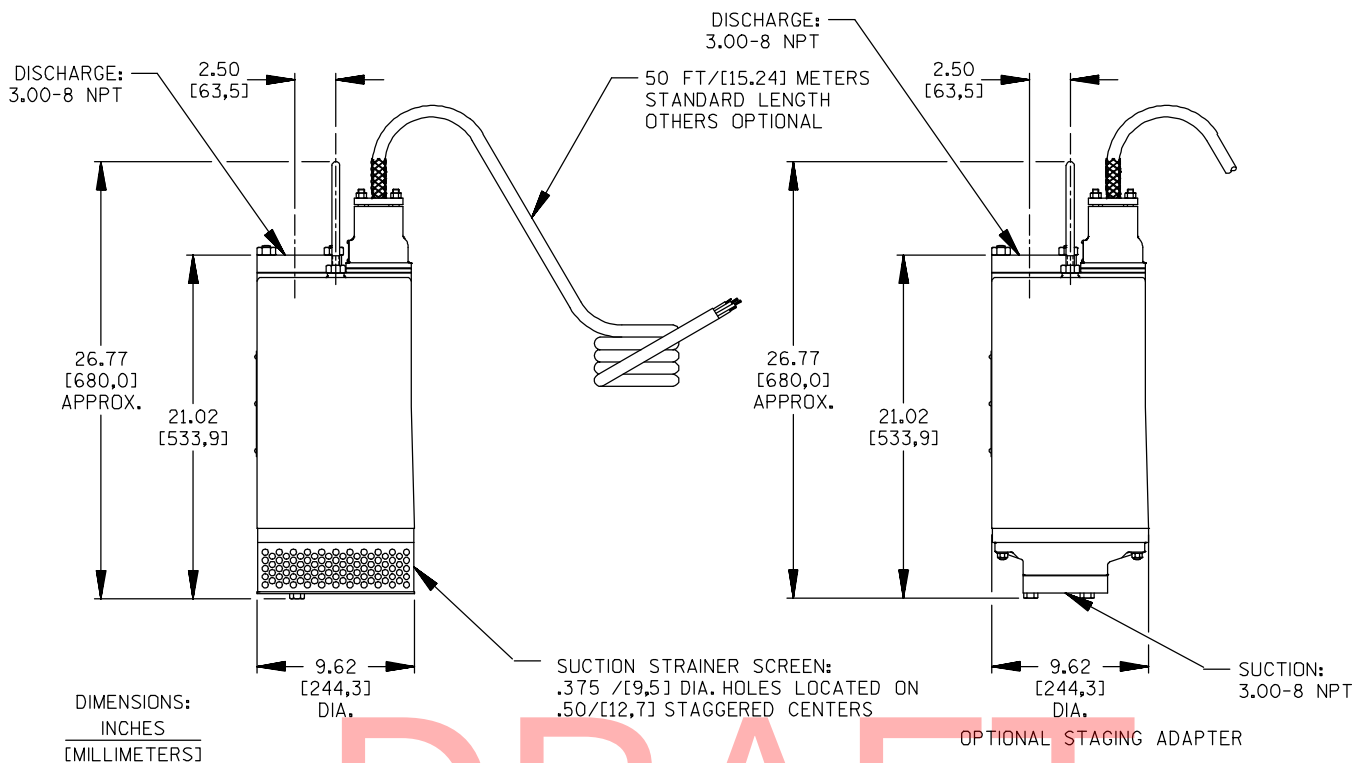
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Specification Data

SECTION 130, PAGE 660

APPROXIMATE
DIMENSIONS and WEIGHTS

NET WEIGHT: 145 LBS. (65,8 KG.)
SHIPPING WEIGHT: 155 LBS. (70,3 KG.)
EXPORT CRATE SIZE: 7.8 CU. FT. (0,22 CU. M.)



GORMAN-RUPP PUMPS

www.grpumps.com

Specifications Subject to Change Without Notice

Printed in U.S.A.



The Pulsatron Series HV designed for high viscosity applications for precise and accurate metering control. The Series HV offers manual control over stroke length and stroke rate as standard with the option to choose between 4-20mA and external pace inputs for automatic control.

Five distinct models are available, having pressure capabilities to 150 PSIG (10 BAR) @ 12 GPD (1.9 lph), and flow capacities to 240 GPD (37.9 lph) @ 80 PSIG (5.6 BAR), with a turndown ratio of 100:1. Metering performance is reproducible to within $\pm 2\%$ of maximum capacity.

Features

- Automatic Control, available with 4-20mADC direct or external pacing, with stop function.
- Manual Control by on-line adjustable stroke rate and stroke length.
- Auto-Off-Manual switch.
- Highly Reliable timing circuit.
- Circuit Protection against voltage and current upsets.
- Panel Mounted Fuse.
- Solenoid Protection by thermal overload with auto-reset.
- Water Resistant, for outdoor and indoor applications.
- Indicator Lights, panel mounted.
- Guided Ball Check Valve Systems, to reduce back flow and enhance outstanding priming characteristics.
- Viscosities to 20,000 CPS.

Controls



Manual Stroke Rate

- Turn-Down Ratio 10:1

Manual Stroke Length

- Turn-Down Ratio 10:1

4-20mA or 20-4mA Input

- Automatic Control

Operating Benefits

- Reliable metering performance.
- Rated "hot" for continuous duty.
- High viscosity capability.
- Leak-free, sealless, liquid end.



Aftermarket

- | | |
|--------------------------|--------------------------|
| • KOPkits | • Tanks |
| • Gauges | • Pre-Engineered Systems |
| • Dampeners | • Process Controllers |
| • Pressure Relief Valves | (PULSAbLue, MicroVision) |



Series HV

Specifications and Model Selection

MODEL		LVB3	LVF4	LVG4	LVG5	LVH7
Capacity nominal (max.)	GPH	0.50	1.00	2.00	4.00	10.00
	GPD	12	24	48	96	240
	LPH	1.9	3.8	7.6	15.1	37.9
Pressure (max.)	PSIG	150	150	110	110	80
	BAR	10	10	7	7	5.6
Connections:		(S) .50" I.D. X .75" O.D. .38" I.D. X .50" OD (LVB3 & F4 only) (S & D) .50" I.D. X .75" O.D. (LVG4,G5 & H7 only)				
Tubing						



Engineering Data

Pump Head Materials Available: GFPPPL
PVC
PVDF
316 SS
PTFE-faced CSPE-backed

Diaphragm:

Check Valves Materials Available:

Seats/O-Rings:

PTFE
CSPE
Viton

Balls:

Ceramic
PTFE
316 SS
Alloy C

Fittings Materials Available:

GFPPPL
PVC
PVDF

Bleed Valve:

Same as fitting and check valve selected, except 316SS

Injection Valve & Foot Valve Assy:

Same as fitting and check valve selected

Tubing:

Clear PVC
White PE

Important: Material Code - GFPPPL=Glass-filled Polypropylene, PVC=Polyvinyl Chloride, PE=Polyethylene, PVDF=Polyvinylidene Fluoride, CSPE=Generic formulation of Hypalon, a registered trademark of E.I. DuPont Company. Viton is a registered trademark of E.I. DuPont Company. PVC wetted end recommended for sodium hypochlorite.

Engineering Data

Reproducibility: +/- 2% at maximum capacity
Viscosity Max CPS: 20,000 CPS
Stroke Frequency Max SPM: 125
Stroke Frequency Turn-Down Ratio: 10:1
Stroke Length Turn-Down Ratio: 10:1
Power Input: 115 VAC/50-60 HZ/1 ph
230 VAC/50-60 HZ/1 ph
Average Current Draw:
@ 115 VAC; Amps: 1.0 Amps
@ 230 VAC; Amps: 0.5 Amps @ 230 VAC
Peak Input Power: 300 Watts
Average Input Power @ Max SPM: 130 Watts

Custom Engineered Designs – Pre-Engineered Systems

Pre-Engineered Systems

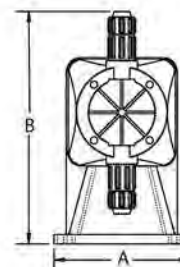
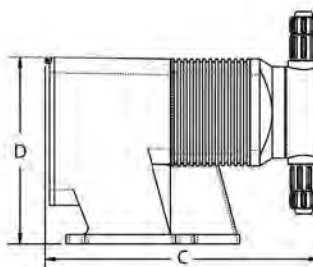
Pulsafeeder's Pre-Engineered Systems are designed to provide complete chemical feed solutions for all electronic metering applications. From stand alone simplex pH control applications to full-featured, redundant sodium hypochlorite disinfection metering, these rugged fabricated assemblies offer turn-key simplicity and industrial-grade durability. The UV-stabilized, high-grade HDPE frame offers maximum chemical compatibility and structural rigidity. Each system is factory assembled and hydrostatically tested prior to shipment.



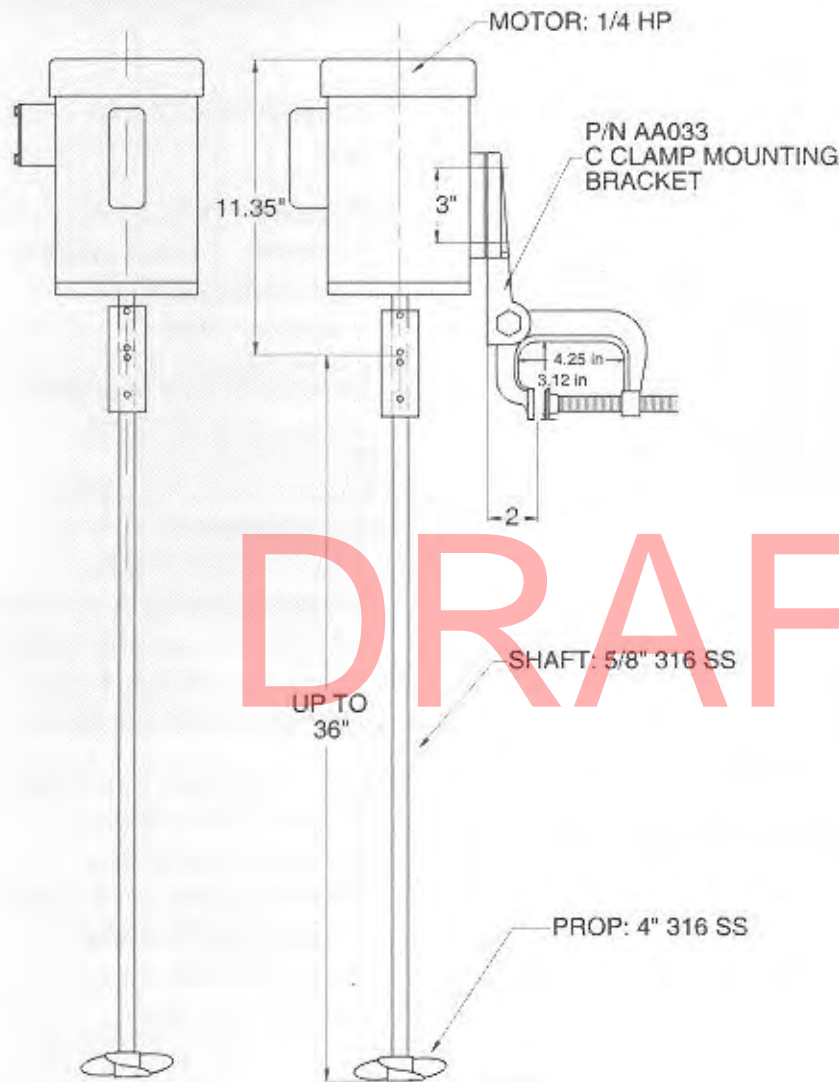
Dimensions

Series HV Dimensions (inches)					
Model No.	A	B	C	D	Shipping Weight
LVB3	5.4	9.3	9.5	7.5	13
LVF4	5.4	10.8	10.8	7.5	18
LVG4	5.4	9.5	10.6	7.5	18
LVG5	5.4	10.8	10.8	7.5	18
LVH7	6.1	11.5	11	8.2	25

NOTE: Inches X 2.54 = cm



SPECIFICATIONS



AA102A

- Speed: 1,725 rpm
- Propeller: (1 or 2)
4" diameter, 3 blade
marine type, material:
316 stainless steel
- Shaft: 5/8" 316 stainless
steel, up to 36" long
- Motor: 1/4 HP, 1,725 rpm,
1/60/115-230, capacitor
start, or 3/60/230-460,
TEFC
- Mounting: rigid mounting to
fixed mixer mounting
bracket, or portable
mounting with mixer motor
mounted to C clamp
mounting bracket no.
AA033.



Revision date 2019-15-4

SAFETY DATA SHEET

Revision number 1

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product Name: Redux E50
Product Use: Water and Wastewater Treatment Coagulant/Flocculant

Revision Date: Apr 15, 2019
Supersedes Date: Mar 5, 2015

Manufacturer's Name: Azure Water Services
Address: 280 Callegari Dr. West Haven CT, 06516
Emergency Phone: Chemtrec, (1) 800-424-9300, in US and Canada only

SECTION 2) HAZARDS IDENTIFICATION

Classification

Corrosive to metals - Category 1
Eye Irritation - Category 2
Skin Irritation - Category 2

Pictograms



Signal Word

Warning

Hazardous Statements - Health

Causes serious eye irritation
Causes skin irritation

Hazardous Statements - Physical

May be corrosive to metals

Precautionary Statements - General

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.

Precautionary Statements - Prevention

Keep only in original packaging.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response

Absorb spillage to prevent material damage.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water.

Specific treatment (see first-aid on this SDS).

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing. And wash it before reuse.

Precautionary Statements - Storage

Store in a corrosive resistant container with a resistant inner liner.

Precautionary Statements - Disposal

No precautionary statement available.

Hazards Not Otherwise Classified (HNOC)

None.

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
PROPRIETARY	Trade Secret Ingredient	45 - 55%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

SECTION 4) FIRST-AID MEASURES

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor/. If breathing has stopped, trained personnel should begin rescue breathing or, if the heart has stopped, immediately start cardiopulmonary resuscitation (CPR) or automated external defibrillation (AED).

Eye Contact

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a flushing duration of 30 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately call a POISON CENTER/doctor.

Skin Contact

Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Rinse skin with lukewarm, gently flowing water/shower for a duration of 30 minutes or until medical aid is available. Immediately call a POISON CENTER/doctor. Wash contaminated clothing before re-use or discard.

Ingestion

Rinse mouth with water. Do NOT induce vomiting. Give 1 to 2 cups of milk or water to drink. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, lie on your side, in the recovery position. Immediately call a POISON CENTER/doctor.

Most Important Symptoms and Effects, Both acute and Delayed

No data available.

Indication of Any Immediate Medical Attention and Special Treatment Needed

No data available.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide. Sand or earth may be used for small fires only.

Use extinguishing agent suitable for type of surrounding fire.

Unsuitable Extinguishing Media

Do not use direct water stream since this may cause fire to spread.

Specific Hazards in Case of Fire

In case of fire, hazardous decomposition products may include sulphur oxides.

Fire-Fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure

Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

Absorb spill with absorbent material or vacuum spill into polyethylene lined steel or plastic drums.

Do not touch or walk through spilled material.

If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

Recommended Equipment

Positive pressure, full-facepiece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

Personal Precautions

Avoid breathing vapor or mist. Avoid contact with skin, eye or clothing. Ensure adequate ventilation. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning Up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Contaminated absorbent material may pose the same hazard as the spilled product.

SECTION 7) HANDLING AND STORAGE

General

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Do not breathe vapors or mists.

Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited.

Remove contaminated clothing and protective equipment before entering eating areas.

Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight and strong oxidizers. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty containers retain residue and may be dangerous.

Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored.

SECTION 8) EXPOSURE CONTROLS, PERSONAL PROTECTION

Eye Protection

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers.

Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	11.10 lb/gal
Specific Gravity	1.33 - 1.35
Appearance	Colorless to yellow liquid
pH	3 - 4
Odor Threshold	N/A
Odor Description	N/A
Water Solubility	complete
Viscosity	< 100cps @20C
Vapor Pressure	Similar to water
Vapor Density	N/A
Freezing Point	<19 °F
Boiling Point	>212 °F
Evaporation Rate	N/A
Flammability	Will not burn

SECTION 10) STABILITY AND REACTIVITY

Stability

Stable under normal storage and handling conditions.

Conditions To Avoid

Avoid heat, sparks, flame, high temperature and contact with incompatible materials.

Hazardous Reactions/Polymerization

Hazardous polymerization will not occur.

Incompatible Materials

Strong bases, acids, oxidizing and reducing agents.

Hazardous Decomposition Products

May produce carbon monoxide, carbon dioxide.

SECTION 11) TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation LC50 : Not Available

Oral LD50 : Not Available

Dermal LD50 : Not Available

Acute Toxicity

Component	weight-%	Oral LD50	Dermal LD50	Inhalation LC50
Trade Secret Ingredient	45 - 55%	= 9187 mg/kg (Rat)	> 2000 mg/k (Rat)	--

Aspiration Hazard

No Data Available

Respiratory/Skin Sensitization

No Data Available

Serious Eye Damage/Irritation

Causes serious eye irritation

Skin Corrosion/Irritation

Causes skin irritation

Specific Target Organ Toxicity - Repeated Exposure

No Data Available

Specific Target Organ Toxicity - Single Exposure

No Data Available

SECTION 12) ECOLOGICAL INFORMATION

Ecotoxicity

Acute aquatic toxicity - Product Information

Fish	LC 50 (96 hour, static) 776.4 mg/L <i>Pimephales promelas</i> (Fathead Minnow) ¹ EC 50 (96 hour, static) 265.5 mg/L <i>Pimephales promelas</i> (Fathead Minnow) ¹
Crustacea	LC 50 (48 hour, static) 803.8 mg/L <i>Ceriodaphnia dubia</i> (Water Flea) ¹ EC 50 (48 hour, static) 33.2 mg/L <i>Ceriodaphnia dubia</i> (Water Flea) ¹
Algae/aquatic plants	No information available

Acute aquatic toxicity - Component Information

Component	weight-%	Algae/aquatic plants	Fish	Toxicity to daphnia and other aquatic invertebrates
Trade Secret Ingredient	45 - 55%	--	LC50 (96 h static) 100 - 500 mg/L (Brachydanio rerio)	--

Mobility in Soil

No data available.

Bio-accumulative Potential

No data available.

Persistence and Degradability

No data available.

Other Adverse Effect

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal

Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.
Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information

NOT REGULATED FOR TRANSPORTATION

This product is excepted from DOT regulations under 49 CFR 173.154(d) when shipped by road or railway. The product exception is referenced in 49 CFR 172.101 Table. Packaging material must not be aluminum, steel or be degraded by this product

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
No applicable CAS	No applicable chemical	-	-

SECTION 16) OTHER INFORMATION

Glossary

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG-Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center(US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self Contained Breathing Apparatus; STEL-Short Term Exposure Limit; TCEQ Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

Additional Information

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Version 1.0:

Revision Date: Apr 15,2019

First Edition.

DISCLAIMER

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.



SAFETY DATA SHEET

Revision date 2019-27-9

Revision number 2

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID: FOC ND-9911
Product Name: Waste/Water Treatment. For industrial use only
Revision Date: Sep 27, 2019
Supersedes Date: April 28, 2019
Manufacturer's Name: Azure Water Services
Address: 280 Callegari Drive West Haven, CT, US, 06516
Emergency Phone: Chemtrec 800-424-9300, in US and Canada only

SECTION 2) HAZARDS IDENTIFICATION

Classification

Eye Irritation - Category 2

Skin Irritation - Category 3

Pictograms



Signal Word

Warning

Hazardous Statements - Health

Causes serious eye irritation

Causes mild skin irritation

Precautionary Statements - General

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Precautionary Statements - Prevention

Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

If skin irritation occurs: Get medical advice/attention.

Precautionary Statements - Storage

No precautionary statement available.

Precautionary Statements - Disposal

No precautionary statement available.

Hazards Not Otherwise Classified (HNOC)

None.

DRAFT

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

Substances/Mixtures

Chemical nature: Anionic Polyacrylamide

This product is not classified as Hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

All of the product's ingredients are either listed or exempt from the TSCA Inventory.

Some specific chemical identity is being withheld as a trade secrets
None of the chemicals in this product are hazardous according to the GHS.

SECTION 4) FIRST-AID MEASURES

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor/. If breathing has stopped, trained personnel should begin rescue breathing or, if the heart has stopped, immediately start cardiopulmonary resuscitation (CPR) or automated external defibrillation (AED).

Eye Contact

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a flushing duration of 30 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately call a POISON CENTER/doctor.

Skin Contact

Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Rinse skin with lukewarm, gently flowing water/shower for a duration of 30 minutes or until medical aid is available. Immediately call a POISON CENTER/doctor. Wash contaminated clothing before re-use or discard.

Ingestion

Rinse mouth with water. Do NOT induce vomiting. Give 1 to 2 cups of milk or water to drink. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, lie on your side, in the recovery position. Immediately call a POISON CENTER/doctor.

Most Important Symptoms and Effects, Both acute and Delayed

No data available.

Indication of Any Immediate Medical Attention and Special Treatment Needed

No data available.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide. Sand or earth may be used for small fires only.

Use extinguishing agent suitable for type of surrounding fire.

Unsuitable Extinguishing Media

Do not use direct water stream since this may cause fire to spread.

Specific Hazards in Case of Fire

In case of fire, hazardous decomposition products may include sulphur oxides.

Fire-Fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure

Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

Absorb spill with absorbent material or vacuum spill into polyethylene lined steel or plastic drums.

Do not touch or walk through spilled material.

If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

Recommended Equipment

Positive pressure, full-facepiece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

Personal Precautions

Avoid breathing vapor or mist. Avoid contact with skin, eye or clothing. Ensure adequate ventilation. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning Up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Contaminated absorbent material may pose the same hazard as the spilled product.

SECTION 7) HANDLING AND STORAGE

General

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Do not breathe vapors or mists.

Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited.

Remove contaminated clothing and protective equipment before entering eating areas.

Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight and strong oxidizers. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty containers retain residue and may be dangerous.

Use ventilation systems where this product is used and stored.

SECTION 8) EXPOSURE CONTROLS, PERSONAL PROTECTION

Eye Protection

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers.

Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	5.85 lb/gal
Specific Gravity	0.65 - 0.85
Appearance	Off white granular solid
pH	6.0 - 8.0
Odor Threshold	N/A
Odor Description	characteristic odor
Water Solubility	< 2%
Viscosity	N/A
Vapor Pressure	Similar to water
Vapor Density	N/A
Freezing Point	<32 °F
Boiling Point	>212 °F
Evaporation Rate	N/A
Flammability	Flash point at or above 200°F/93°C

SECTION 10) STABILITY AND REACTIVITY

Stability

Stable under normal storage and handling conditions.

Conditions To Avoid

Avoid heat, sparks, flame, high temperature and contact with incompatible materials.

Hazardous Reactions/Polymerization

Hazardous polymerization will not occur.

Incompatible Materials

Strong bases, acids, oxidizing and reducing agents.

Hazardous Decomposition Products

May produce carbon monoxide, carbon dioxide.

SECTION 11) TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation, ingestion, skin absorption.

Acute Toxicity

Acute Oral Toxicity: Results displayed may not be the result of actual testing of this material but based on a similar tested material
LD50, Rat, 4 hr > 2,500 mg/kg (estimated)

Acute Inhalation Toxicity: LC50, Rat, 4 hr, > 20mg/l (estimated)

Acute Dermal Toxicity: LD50, Rabbit, > 10,000 mg/kg (estimated)

Carcinogenicity

Based on available data, the classification criteria are not meet.

Respiratory/Skin Sensitization

No Data Available

Serious Eye Damage/Irritation

Causes serious eye irritation

Skin Corrosion/Irritation

Causes mild skin irritation

Specific Target Organ Toxicity - Repeated Exposure

No Data Available

Specific Target Organ Toxicity - Single Exposure

No Data Available

SECTION 12) ECOLOGICAL INFORMATION

Ecotoxicity effects

Aquatic Toxicity: Ecotoxicological information provided is based on a structurally or compositionally similar product.

LC50, Bluegill sunfish (*Lepomis macrochirus*), 96 hr, > 100 mg/kg OECD Test Guideline 203
LC50, Rainbow Trout (*Oncorhynchus mykiss*), 96 hr, > 100 mg/l OECD Test Guideline 203

EC50, Water Flea (*Daphnia Magna*), 48 hr, > 100 mg/l OECD Test Guideline 202
EC50, Amphipoda (*Corophium Volutator*), 10 d, 1415 mg/l OECD Test Guideline 202
EC50, Copepod (*Acartia Tonsa*), 48 hr, 342 mg/l OECD Test Guideline 202

IC50, Green Algae (*Selenastrum capricornutum*), 72 hr, > 100mg/l OECD Test Guideline 201
IC50, Diatom (*Skeletonema Costatum*), 72 hr, 2,276 mg/l OECD Test Guideline 201

Mobility in Soil

Water Solubility: Limited by viscosity.

Surface Tension: Not applicable

Persistence and degradability

Ecotoxicological information provided is based on a structurally or compositionally similar product.

Not Readily Biodegradable.

Ready Biodegradability: d:< 10%

Biodegradability in Seawater: d: 1.7%

OECD Test Guideline 301 D/28

OECD Test Guideline 306/28

Bioaccumulative potential

Bioaccumulation is unlikely. Because of the high molecular weight of the polymer diffusion through biological membranes is very small.

Partion coefficient

N-octanol/water: Not applicable

Other adverse effects

This material is not classified as dangerous for the environment .

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal

Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.

Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information

For all transportation accidents, call CHEMTREC at 800/424-9300. All spills and leaks of this material must be handled in accordance with local, state, and federal regulations.

DOT Shipping Designation:

Non-hazardous under 29-CFR 1910.1200. Water treatment compound

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
No applicable CAS	No applicable chemical	-	-

SECTION 16) OTHER INFORMATION

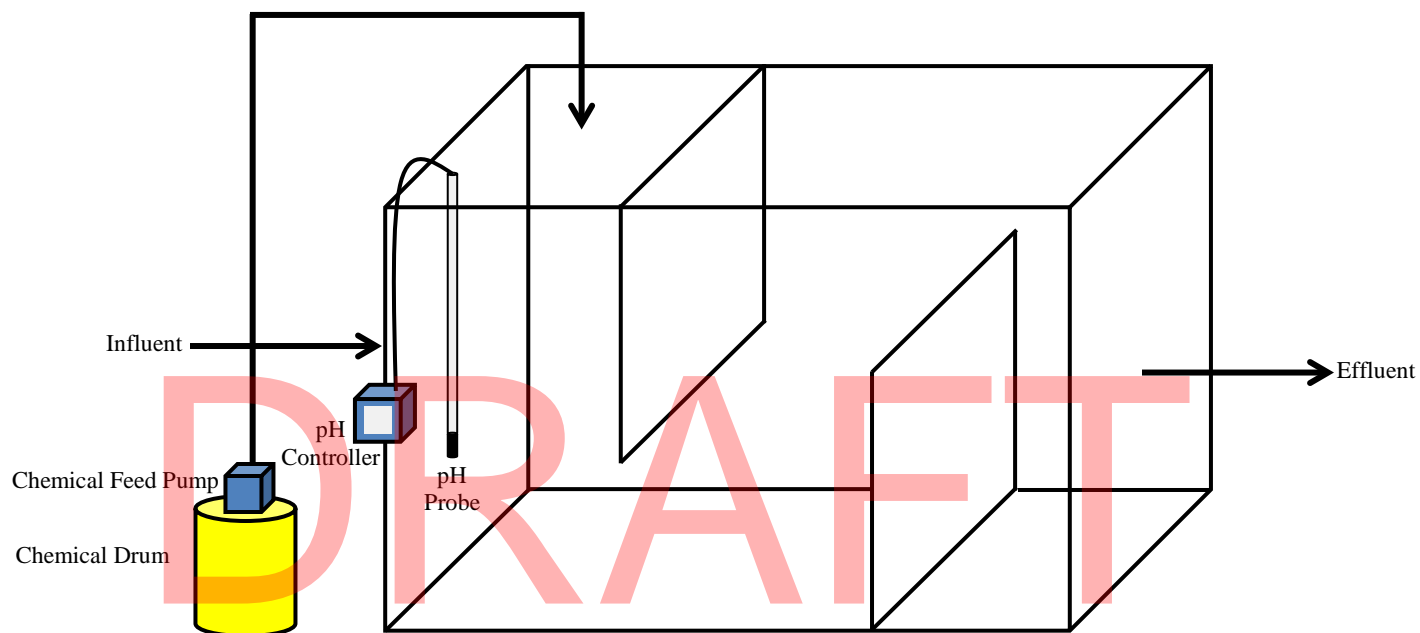
Glossary

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG-Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center(US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self Contained Breathing Apparatus; STEL-Short Term Exposure Limit; TCEQ Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

DISCLAIMER

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.



Notes:

- 1.) Figure is not to scale.
- 2.) System layout can vary with site conditions.



89 Crawford Street
Leominster, Massachusetts 01453
Tel: 774.450.7177
Fax: 888.835.0617
www.lrt-llc.net

Configuration of pH Adjustment System



DRAFT

One Controller for the Broadest Range of Sensors.

Choose from 30 digital and analog sensor families for up to 17 different parameters.

Maximum Versatility

The sc200 controller allows the use of digital and analog sensors, either alone or in combination, to provide compatibility with Hach's broad range of sensors, eliminating the need for dedicated, parameter-specific controllers.

Ease of Use and Confidence in Results

Large, high-resolution, transreflective display provides optimal viewing resolution in any lighting condition. Guided calibration procedures in 19 languages minimize complexity and reduce operator error. Password-protected SD card reader offers a simple solution for data download and transfer. Visual warning system provides critical alerts.

Wide Variety of Communication Options

Utilize two to five analog outputs to transmit primary and secondary values for each sensor, or integrate Hach sensors and analyzers into MODBUS RS232/RS485, Profibus® DP, and HART networks.



Password protected SD card reader offers a simple solution for data download and transfer, and sc200 and digital sensor configuration file duplication and backup.

Controller Comparison



Features	Previous Models		sc200™ Controller	Benefits
	sc100™ Controller	GLI53 Controller		
Display	64 x 128 pixels 33 x 66 mm (1.3 x 2.6 in.)	64 x 128 pixels 33 x 66 mm (1.3 x 2.6 in.)	160 x 240 pixels 48 x 68 mm (1.89 x 2.67 in.) Transreflective	<ul style="list-style-type: none"> Improved user interface—50% bigger Easier to read in daylight and sunlight
Data Management	irDA Port/PDA Service Cable	N/A	SD Card Service Cable	<ul style="list-style-type: none"> Simplifies data transfer Standardized accessories/ max compatibility
Sensor Inputs	2 Max Direct Digital Analog via External Gateway	2 Max Analog Depending on Parameter	2 Max Digital and/or Analog with Sensor Card	<ul style="list-style-type: none"> Simplifies analog sensor connections Works with analog and digital sensors
Analog Inputs	N/A	N/A	1 Analog Input Signal Analog 4-20mA Card	<ul style="list-style-type: none"> Enables non-sc analyzer monitoring Accepts mA signals from other analyzers for local display Consolidates analog mA signals to a digital output
4-20 mA Outputs	2 Standard	2 Standard	2 Standard Optional 3 Additional	<ul style="list-style-type: none"> Total of five (5) 4-20 mA outputs allows multiple mA outputs per sensor input
Digital Communication	MODBUS RS232/RS485 Profibus DP V1.0	HART	MODBUS RS232/RS485 Profibus DP V1.0 HART 7.2	<ul style="list-style-type: none"> Unprecedented combination of sensor breadth and digital communication options

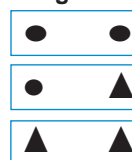
Choose from Hach's Broad Range of Digital and Analog Sensors

Parameter	Sensor	Digital or Analog
Ammonia	AMTAX™ sc, NH4D sc, AISE sc, AN-ISE sc	●
Chlorine	CLF10 sc, CLT10 sc, 9184 sc	●
Chlorine Dioxide	9185 sc	●
Conductivity	GLI 3400 Contacting, GLI 3700 Inductive	▲
Dissolved Oxygen	LDO® Model 2, 5740 sc	●
Dissolved Oxygen	5500	▲
Flow	U53, F53 Sensors	▲
Nitrate	NITRATAX™ sc, NO3D sc, NISE sc, AN-ISE sc	●
Oil in Water	FP360 sc	●
Organics	UVAS sc	●
Ozone	9187 sc	●
pH/ORP	pHD	●
pH/ORP	pHD, pH Combination, LCP	▲
Phosphate	PHOSPHAX™ sc	●
Sludge Level	SONATAX™ sc	●
Suspended Solids	SOLITAX™ sc, TSS sc	●
Turbidity	1720E, FT660 sc, SS7 sc, ULTRATURB sc, SOLITAX sc, TSS sc	●
Ultra Pure Conductivity	8310, 8311, 8312, 8315, 8316, 8317 Contacting	▲
Ultra Pure pH/ORP	8362	▲

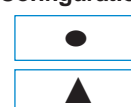
● = Digital ▲ = Analog

Connect up to two of any of the sensors listed above, in any combination, to meet your application needs. The diagrams below demonstrate the potential configurations. Operation of analog sensors requires the controller to be equipped with the appropriate sensor module. Contact Hach Technical Support for help with selecting the appropriate module.

2 Channel Configurations



1 Channel Configurations



Specifications*

Dimensions (H x W x D)	5.7 in x 5.7 in x 7.1 in (144 mm x 144 mm x 181 mm)
Display	Graphic dot matrix LCD with LED backlighting, transreflective
Display Size	1.9 x 2.7 in. (48 mm x 68 mm)
Display Resolution	240 x 160 pixels
Weight	3.75 lbs. (1.70 kg)
Power Requirements (Voltage)	100 - 240 V AC, 24 V DC
Power Requirements (Hz)	50/60 Hz
Operating Temperature Range	-20 to 60 °C , 0 to 95% RH non-condensing
Analog Outputs	Two (Five with optional expansion module) to isolated current outputs, max 550 Ω , Accuracy: ± 0.1% of FS (20mA) at 25 °C, ± 0.5% of FS over -20 °C to 60 °C range
Analog Output Functional Mode	Operational Mode: measurement or calculated value Linear, Logarithmic, Bi-linear, PID
Security Levels	2 password-protected levels
Mounting Configurations	Wall, pole, and panel mounting
Enclosure Rating	NEMA 4X/IP66
Conduit Openings	1/2 in NPT Conduit
Relay: Operational Mode	Primary or secondary measurement, calculated value (dual channel only) or timer

Relay Functions

Scheduler (Timer), Alarm, Feeder Control, Event Control, Pulse Width Modulation, Frequency Control, and Warning

Relays

Four electromechanical SPDT (Form C) contacts, 1200 W, 5 A

Communication

MODBUS RS232/RS485, PROFIBUS DPV1, or HART 7.2 optional

Memory Backup

Flash memory

Electrical

EMC

Certifications

CE compliant for conducted and radiated emissions:

- CISPR 11 (Class A limits)

- EMC Immunity EN 61326-1 (Industrial limits)

Safety

cETLus safety mark for:

- General Locations per ANSI/UL 61010-1 & CAN/CSA C22.2. No. 61010-1

- ~~Hazardous~~ Location Class I, Division 2, Groups A, B, C & D (Zone 2, Group IIC) per FM 3600 / FM 3611 & CSA C22.2 No. 213 M1987 with approved options and appropriately rated Class I, Division 2 or Zone 2 sensors

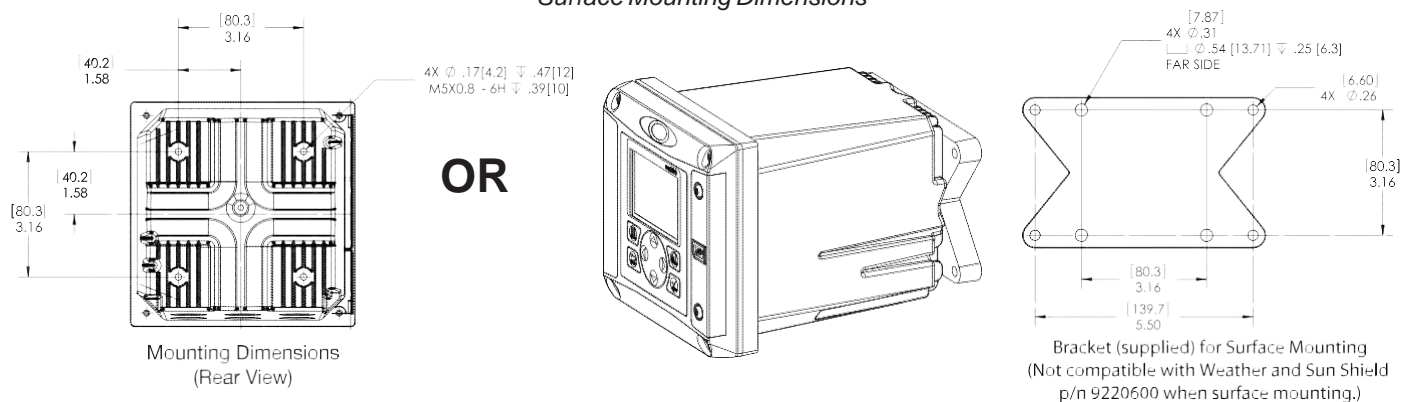
cULus safety mark

- General Locations per UL 61010-1 & CAN/CSA C22.2. No. 61010-1

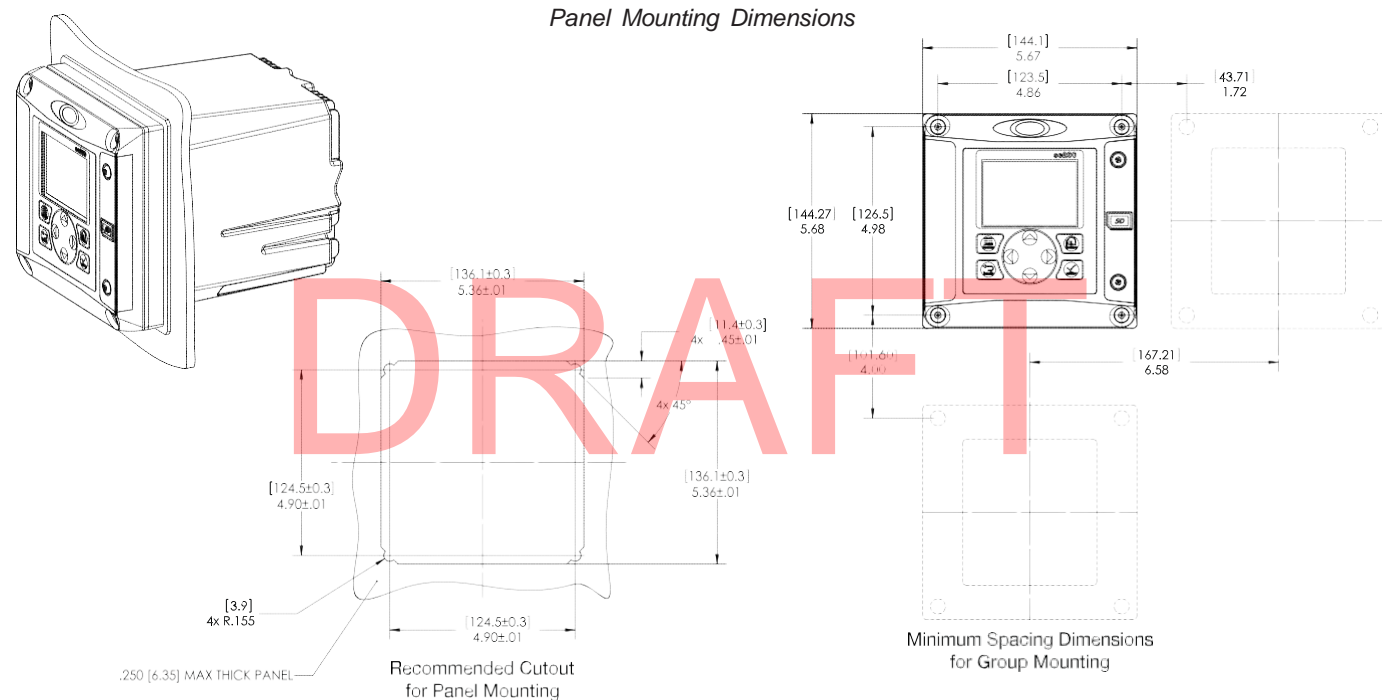
**Subject to change without notice.*

Dimensions

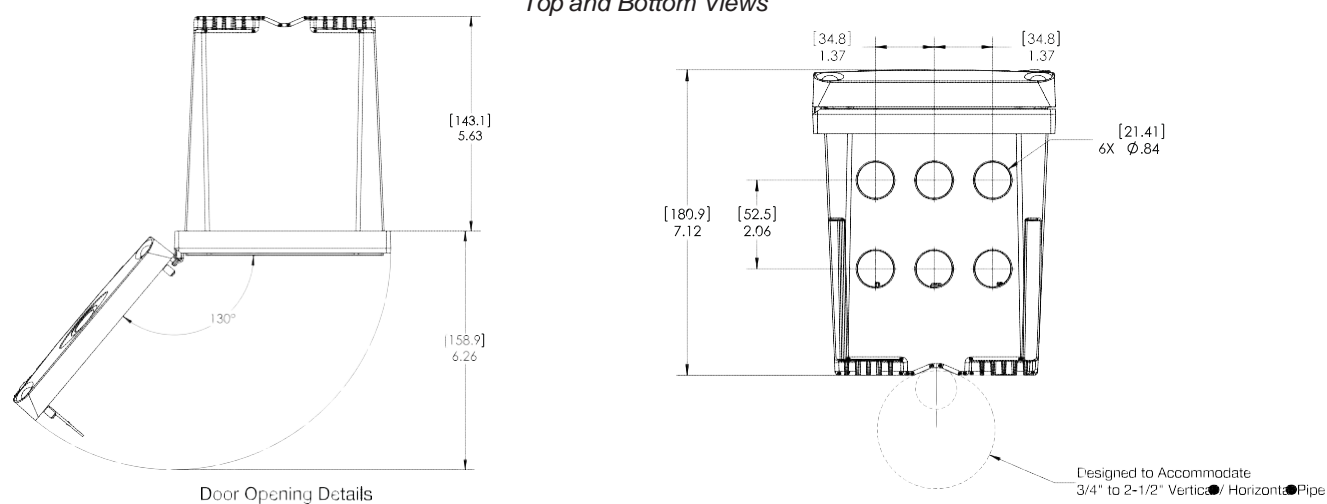
Surface Mounting Dimensions



Panel Mounting Dimensions



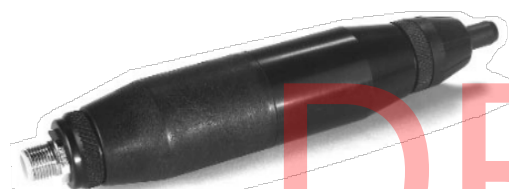
Top and Bottom Views





3/4-inch Combination pH and ORP Sensor Kits

pH/ORP



Use the Digital Gateway to make any Hach analog combination pH or ORP sensor compatible with the Hach sc1000 Controller.



Digital combination pH and ORP sensors are available in convertible, insertion, and sanitary mounting styles. Choose from rugged dome electrodes or "easy-to-clean" flat glass electrodes.

DW

WW

PW

IW

Features and Benefits

Low Price—High Performance

These combination sensors are designed for specialty applications for immersion or in-line mounting. The reference cell features a double-junction design for extended service life, and a built-in solution ground. The body is molded from chemically-resistant Ryton® or PVDF, and the reference junction is coaxial porous Teflon®. All sensors are rated 0 to 105°C up to 100 psig, and have integral 4.5 m (15 ft.) cables with tinned leads. The PC-series (for pH) and RC-series (for ORP) combination sensors are ideal for measuring mild and aggressive media.

Special Electrode Configurations

Sensors with rugged dome electrodes, "easy-to-clean" flat glass electrodes, and even HF (hydrofluoric acid) resistant glass electrodes are available for a wide variety of process solutions.

Temperature Compensation Element Option

The PC-series combination pH sensors are available with or without a Pt 1000 ohm RTD temperature element. The RC-series combination ORP sensors are supplied without a temperature element.

Versatile Mounting Styles

Sensors are available in three mounting styles—convertible, insertion, and sanitary. Please turn to page 3 for more information.

Full-Featured "Plug and Play" Hach sc Digital Controllers

There are no complicated wiring or set up procedures with any Hach sc controller. Just plug in any combination of Hach digital sensors and it's ready to use—it's "plug and play."

One or multiple sensors—The sc controller family allows you to receive data from up to eight Hach digital sensors in any combination using a single controller.

Communications—Multiple alarm/control schemes are available using the relays and PID control outputs. Available communications include analog 4-20 mA, digital MODBUS® (RS485 and RS232) or Profibus DP protocols. (Other digital protocols are available. Contact your Hach representative for details.)

Data logger—A built-in data logger collects measurement data, calibration, verification points, and alarm history.

Specifications*

Most pH applications fall in the 2.5-12.5 pH range. General purpose pH glass electrodes perform well in this range. Some industrial applications require accurate measurements and control at pH values below 2 or above 12. Consult Hach Technical Support for details on these applications.

Combination pH Sensors

Measuring Range

0 to 14 pH

Accuracy

Less than 0.1 pH under reference conditions

Temperature Range

0 to 105°C (32 to 221°F)

Flow Rate

0 to 2 m/s (0 to 6.6 ft./s); non-abrasive

Pressure Range

0 to 6.9 bar at 100°C (0 to 100 psig at 212°F)

Signal Transmission Distance

100 m (328 ft.) when used with the Hach Digital Gateway and a Hach sc Digital Controller.

1000 m (3280 ft.) when used with the Hach Digital Gateway, Termination Box, and a Hach sc Digital Controller.

Sensor Cable

Integral coaxial cable (plus two conductors for temperature compensator option); 4.5 m (15 ft.) long

Wetted Materials

Convertible style: Ryton® body (glass filled)

Insertion style: PVDF body (Kynar®)

Sanitary style: 316 stainless steel sleeved PVDF body

Common materials for all sensor styles include PTFE Teflon double junction, glass process electrode, and Viton® O-rings

Warranty

90 days

Combination ORP Sensors

Measuring Range

-2000 to +2000 millivolts

Accuracy

Limited to calibration solution accuracy (± 20 mV)

Temperature Range

0 to 105°C (32 to 221°F)

Flow Rate

0 to 2 m/s (0 to 6.6 ft./s); non-abrasive

Pressure Range

0 to 6.9 bar at 100°C (0 to 100 psig at 212°F)

Signal Transmission Distance

100 m (328 ft.) when used with the Hach Digital Gateway and a Hach sc Digital Controller.

1000 m (3280 ft.) when used with the Hach Digital Gateway, Termination Box, and a Hach sc Digital Controller.

Sensor Cable

Integral coaxial cable; 4.5 m (15 ft.) long; terminated with stripped and tinned wires

Wetted Materials

Convertible style: Ryton® body (glass filled)

Insertion style: PVDF body (Kynar®)

Common materials for all sensor styles include PTFE Teflon double junction, glass with platinum process electrode, and Viton® O-rings

Warranty

90 days

*Specifications subject to change without notice.

Ryton® is a registered trademark of Phillips 66 Co.; Viton® is a registered trademark of E.I. DuPont de Nemours + Co.; Kynar® is a registered trademark of Pennwalt Corp.

Engineering Specifications

- The pH sensor shall be available in convertible, insertion or sanitary styles. The ORP sensor shall be available in only convertible or insertion styles.
- The convertible style sensor shall have a Ryton® body. The insertion style sensor shall have a PVDF body. The sanitary style sensor shall have a 316 stainless steel sleeved PVDF body. Common materials for all sensor styles shall include a PTFE Teflon® double junction, and Viton® O-rings. The pH sensor shall have a glass pH electrode. The ORP sensor shall have a platinum ORP electrode.
- The convertible style pH sensor shall be available with or without a built-in Pt 1000 ohm RTD temperature element. Insertion and sanitary style pH sensors shall have a built-in Pt 1000 ohm RTD temperature element. Convertible and insertion style ORP sensors shall not have a built-in temperature element.
- The sensor shall communicate via MODBUS® RS-485 to a Hach sc Digital Controller.
- The sensor shall be Hach Company Model PC sc or PC-series for pH measurement or Model PC sc or RC-series for ORP measurement.

Dimensions

Convertible Style Sensor

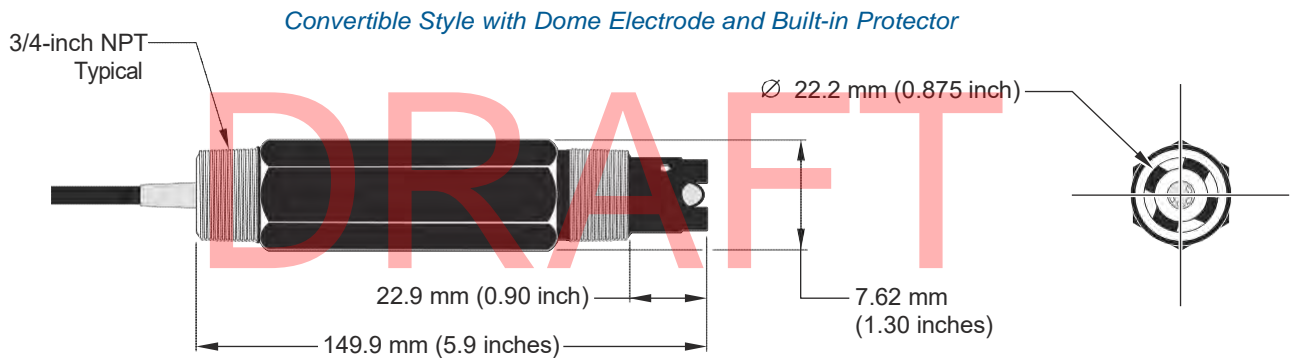
The convertible style sensor has a Ryton® body that features 3/4-inch NPT threads on both ends. The sensor can be directly mounted into a standard 3/4-inch pipe tee for flow-through mounting or fastened onto the end of a pipe for immersion mounting. The convertible style sensor enables inventory consolidation, thereby reducing associated costs. Mounting tees and immersion mounting hardware are offered in a variety of materials to suit application requirements.

Insertion Style Sensor

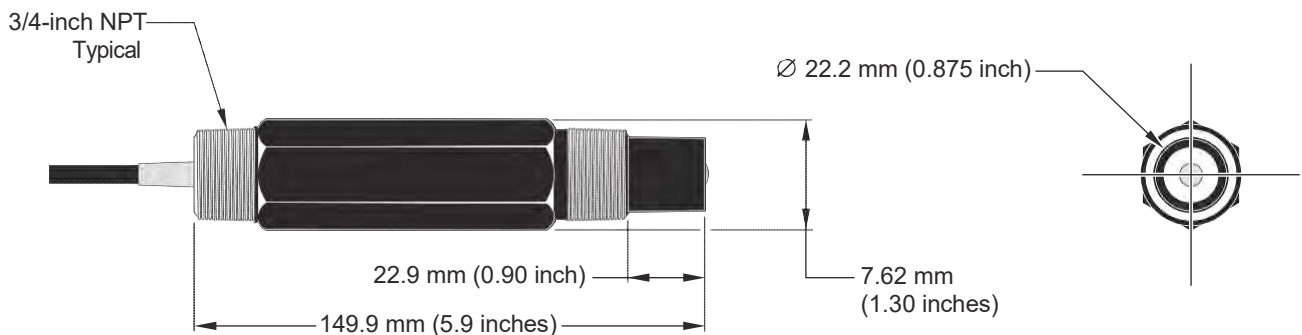
Insertion style sensors feature a longer, non-threaded PVDF body with two Viton® O-rings, providing a seal when used with the optional Hach insertion mount hardware assembly. This ball valve hardware enables sensor insertion and retraction from a pipe or vessel without having to stop the process flow.

Sanitary Style Sensor

The sanitary style sensor, offered for pH measurement, has a 316 stainless steel-sleeved PVDF body with a 2-inch flange. The sensor mates to a standard 2-inch Tri-Clover fitting. The optional Hach sanitary mounting hardware includes a standard 2-inch sanitary tee, sanitary clamp, and Viton® sanitary gasket.



Convertible Style with Flat Electrode





The Pulsatron Series A Plus offers manual function controls over stroke length and stroke rate as standard with the option to select external pace for automatic control.

Ten distinct models are available, having pressure capabilities to 250 PSIG (17 BAR) @ 12 GPO (1.9 lph), and flow capacities to 58 GPO (9.1 lph) @ 100 PSIG (7.0 BAR), with a standard turndown ratio of 100:1, and optional ratio of 1000:1. Metering performance is reproducible to within $\pm 3\%$ of maximum capacity.

Features

- Manual Control by on-line adjustable stroke rate and stroke length.
- Highly Reliable timing circuit.
- Circuit Protection against voltage and current upsets.
- Solenoid Protection by thermal overload with auto-reset.
- Water Resistant, for outdoor and indoor applications.
- Internally Dampened To Reduce Noise.
- Guided Ball Check Valve Systems, to reduce back flow and enhance outstanding priming characteristics.
- Few Moving Parts and Wall Mountable.
- Safe & Easy Priming with durable leak-free bleed valve assembly (standard).
- Optional Control: External pace with auto/manual selection.

Controls



Manual Stroke Rate

Manual Stroke Length

External Pacing - Optional

External Pace With Stop - Optional (125 SPM only)

Controls Options

Feature	Standard Configuration	Optional Configuration ¹
External Pacing	--	Auto / Manual Selection /
External Pace w/ Stop (125SPM only)	--	Auto / Manual Selection ²
Manual Stroke Rate	10:1 Ratio	100:1 Ratio
Manual Stroke Length	10:1 Ratio	10:1 Ratio
Total Turndown Ratio	100:1 Ratio	1000:1 Ratio

Note 1: On S2, S3 & S4 sizes only.

Note 2: Not available on 1000:1 turndown pumps.

Operating Benefits

- Reliable metering performance.
- Rated "hot" for continuous duty.
- High viscosity capability.
- Leak-free, sealless, liquid end.



Aftermarket

- KOPkits
- Gauges
- Dampeners
- Pressure Relief Valves
- Tanks
- Pre-Engineered Systems
- Process Controllers (PULSAblue, MicroVision)



Series A Plus Electronic Metering Pumps



Series A Plus Specifications and Model Selection

MODEL			LBC2	LB02	LBC3	LB03	LB04	LB64	LBC4	LBS2	LBS3	LBS4
Capacity nominal (max.)		GPH	025	025	0.42	0.50	1.00	125	2.00	0.50	1.38	2.42
		GPO	6	6	10	12	24	30	48	12	33	58
		LPH	0.9	0.9	1.6	1.9	3.8	4.7	7.6	1.9	5.2	9.14
Pressure ³ (max.)	GFPP,PVDF,316SS or PVC <;N/code w/TFE Seats)	PSIG (Bar)	250(17)	150 (10)	250 (17)	150 (10)	100 (7)	100 (7)	50 (33)	250 (17)	150 (10)	100 (7)
	PVC (V code) Viton or CSPE Seats IDegas Liquid End		150 (10)									
Connections:		Tubing	1 1/4" ID X 3/8" OD						3/8" ID X 1/2" OD	1 1/4" ID X 3/8" OD		
		Plumbing	1 1/4" FNPT									
Strokes/Minute		SPM	125							250		

Note 3: Pumps with rated pressure above 150 PSI will be de-rated to 150 PSI Max. when selecting certain valve options, see Price Book for details.

Engineering Data

Pump Head Materials Available: GFPP, PVC, PVDF, 316 SS, PTFE-faced CSPE-backed

Diaphragm: PTFE-faced CSPE-backed

Check Valves Materials Available: Seats/O-Rings:

Seats/O-Rings:

Balls:

Fittings Materials Available:

Bleed Valve:

Injection Valve & Foot Valve Assy:

Tubing:

Important: Material Code - GFPP=Glass-filled Polypropylene, PVC=Polyvinyl Chloride, PE=Polyethylene, PVDF=Polyvinylidene Fluoride, CSPE=Generic formulation of Hypalon, a registered trademark of E.I. DuPont Company. Viton is a registered trademark of E.I. DuPont Company. PVC wetted end recommended for sodium hypochlorite.

Engineering Data

Reproducibility: +/- 3% at maximum capacity

Viscosity Max CPS: 1000 CPS

Stroke Frequency Max SPM: 125 / 250 by Model

Stroke Frequency Turn-Down Ratio: 10:1/100:1 by Model

Stroke Length Turn-Down Ratio: 10:1

Power Input: 115 VAC/50-60 HZ/1 ph, 230 VAC/50-60 HZ/1 ph

Average Current Draw: @ 115 VAC; Amps: 0.6 Amps, @ 230 VAC; Amps: 0.3 Amps

Peak Input Power: 130 Watts

Average Input Power @ Max SPM: 50 Watts

Custom Engineered Designs- Pre-Engineered Systems

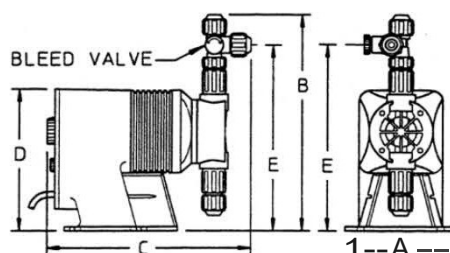


Pre-Engineered Systems Pulsafeeder's Pre-Engineered Systems are designed to provide complete chemical feed solutions for all electronic metering applications. From stand alone simplex pH control applications to full-featured, redundant sodium hypochlorite disinfection metering, these rugged fabricated assemblies offer turn-key simplicity and industrial-grade durability. The UV-stabilized, high-grade HOPE frame offers maximum chemical compatibility and structural rigidity. Each system is factory assembled and hydrostatically tested prior to shipment.

Dimensions

Series A PLUS Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight
LB02 IS2	5.0	9.6	9.5	6.5	8.2	10
LBC2	5.0	9.9	9.5	6.5	8.5	10
LBC3	5.0	9.9	9.5	6.5	8.5	10
LB03 IS3	5.0	9.9	9.5	6.5	8.5	10
LB04	5.0	9.9	9.5	6.5	8.5	10
LB64	5.0	9.9	9.5	6.5	8.5	10
LBC4	5.0	9.9	9.5	6.5	8.5	10

NOTE: inches X 2.54 cm





95-Gallon OverPack - 32" dia x 41.5", 1 each/package



Stock a SpillTech® OverPack with sorbents for emergency spill response, or use it as a salvage drum to ship damaged containers or hazardous waste.

- DOT-Approved for Salvage: All SpillTech® OverPacks are DOT-approved and X-rated for use as salvage drums. Helps companies conform to federal regulations when shipping damaged or leaking containers of hazardous materials, or absorbents contaminated with hazardous substances.
- Perfect for Spill Kits: Stores sorbent products (not included) for easy access as needed for spill control. Saves time when quick response is necessary.
- Sturdy Construction: 100% polyethylene OverPack resists chemicals, rust and corrosion for years of use. Integrated handles make them easy to lift, move or carry with standard material handling equipment. Twist-on, double-wall lid with closed-cell gasket provides sealed, secure closure to prevent leaks and protect contents from moisture, dirt and damage. Durable to withstand rough handling.
- Customized for You: We can customize a Spill Kit to your exact specifications, including the container, its contents and accessories, with no upcharge! Contact your local Distributor for details.

A95OVER Specifications

Dimensions:	ext. dia. 32" x 41.5" H
Shipping Dimensions:	31.75" W x 41.5" L x 31.75" H
Sold as:	1 per package
Color:	Yellow
Composition:	Polyethylene
# per Pallet:	3
Incinerable:	No
Ship Class:	250

Metric Equivalent Specifications

Dimensions:	ext. dia. 81.3cm x 105.4cm H
Shipping Dimensions:	80.6cm W x 105.4cm L x 80.6cm H
Dimensions:	





A95OVER Technical Information

Warnings & Restrictions:

There are no known warnings and restrictions for this product.

Regulations and Compliance:

49 CFR 173.3(c)(1) - If a container of hazardous waste is damaged or leaking, it can be placed in a compatible salvage drum that meets UN criteria for shipping

49 CFR 173.12(b)(2)(iv) - When labpacking, "Inner packagings...must be surrounded by a chemically compatible absorbent material in sufficient quantity to absorb the total liquid contents."

49 CFR 173.12(b) - A container used for labpacking must be "a UN 1A2 or UN 1B2 metal drum, a UN 1D plywood drum, a UN 1G fiber drum or a UN 1H2 plastic drum tested and marked at least for the Packing Group III performance level for liquids or solids."

DRAFT





Borden & Remington Corp
63 Water St. PO Box 2573
Fall River, MA, USA, 02722
Telephone: (508) 675 0096

Sodium Hydroxide Solution 10% to 50%

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SECTION 1. IDENTIFICATION

Product identifier used on the label

: **Sodium Hydroxide Solution 10% to 50%**

Product Code(s) : Not available.

Recommended use of the chemical and restrictions on use

: Chemical intermediate.; Reagent
Use pattern: Professional Use Only
Recommended restrictions: No restrictions on use known.

Chemical family : Inorganic acid

Name, address, and telephone number
of the supplier:

Borden & Remington Corp

63 Water St.
PO Box 2573
Fall River, MA, USA
02722

Supplier's Telephone # : 508-675-0096

24 Hr. Emergency Tel # : Chemtrec: 1-800-424-9300 (Within Continental U.S.); 703-527-3887.

Name, address, and telephone number of
the manufacturer:

Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Clear, colorless liquid.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification:

Corrosive to Metals - Category 1
Skin Corrosion/Irritation - Category 1
Eye Damage/Irritation - Category 1
Specific Target Organ Toxicity, Single Exposure -Category 3 (respiratory)

Label elements

Hazard pictogram(s)



Signal Word

DANGER!

Hazard statement(s)

May be corrosive to metals.
Causes severe skin burns and eye damage.
May cause respiratory irritation.



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Precautionary statement(s)

Keep only in original container.
Do not breathe mist.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/clothing and eye/face protection.

If swallowed: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash contaminated clothing before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Immediately call a POISON CENTER or doctor/physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
Absorb spillage to prevent material damage.

Store in corrosive resistant container with a resistant inner liner.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Dispose of contents/container in accordance with local regulation.

Other hazards

Other hazards which do not result in classification:
Contact with most metals will generate flammable hydrogen gas. Contact with water gives off heat. Burning produces obnoxious and toxic fumes. Chronic skin contact with low concentrations may cause dermatitis.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance; solution

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration</u>
sodium hydroxide	Caustic soda Sodium hydrate soda lye	1310-73-2	10.0 - 50.0
Water	H2O	7732-18-5	Balance

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

- Ingestion* : Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Have victim rinse mouth with water, then give one to two glasses of water to drink. Seek immediate medical attention/advice.
- Inhalation* : Immediately remove person to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. Seek immediate medical attention/advice.
- Skin contact* : Wear appropriate protective equipment. Remove/Take off immediately all contaminated clothing. Immediately flush skin with gently flowing, running water for at least 20 minutes. Do not rub area of contact. Obtain medical attention immediately. Wash contaminated clothing before reuse. Contaminated leather may require disposal.
- Eye contact* : Wear appropriate protective equipment. Protect unharmed eye. If in contact with eyes, immediately flush eyes with running water for at least 20 minutes. If contact lens is present, DO NOT delay flushing or attempt to remove the lens until flushing is done. Obtain medical attention immediately.



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Most important symptoms and effects, both acute and delayed

- : Causes severe skin irritation. Symptoms may include redness, blistering, pain and swelling. Causes serious eye damage. Symptoms may include severe pain, blurred vision, redness and corrosive damage. May cause respiratory irritation. Symptoms may include coughing, choking and wheezing. Could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Ingestion may cause severe burns to the mucous membranes of the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations and bleeding.

Indication of any immediate medical attention and special treatment needed

- : Immediate medical attention is required. Causes chemical burns. Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

- : Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical. May react with water. Use water spray with caution.

Unsuitable extinguishing media

- : Use water spray with caution. Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture / Conditions of flammability

- : Not considered flammable. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

Flammability classification (OSHA 29 CFR 1910.106)

- : Not flammable.

Hazardous combustion products

- : Sodium oxides.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

- : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Special fire-fighting procedures

- : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Use water to cool fire-exposed containers. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply or any natural waterway. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Environmental precautions

- : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

Methods and material for containment and cleaning up



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- : Remove all sources of ignition. Ventilate area of release. Stop the spill at source if it is safe to do so. Dike for water control. Dilute acid with water and neutralize with Sodium Carbonate (soda ash) or lime. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Notify the appropriate authorities as required.

Special spill response procedures

- : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).

US CERCLA Reportable quantity (RQ): sodium hydroxide (1000 lbs / 454 kg).

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

- : Wear protective gloves/clothing and eye/face protection. Use only in well-ventilated areas. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment. Do not breathe fumes or mists. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Keep away from heat and flame. Keep away from incompatibles. May react with water, generating heat. When diluting, always add the product to water. Never add water to the product. When mixing with water, stir small amounts in slowly. Use cold water to prevent excessive heat generation. The addition of caustic soda to liquid will cause a rise in temperature. Keep containers tightly closed when not in use. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

Conditions for safe storage

- : Store in a well-ventilated place. Keep container tightly closed. Store locked up. Keep away from incompatibles. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Do not freeze. Store in corrosion-resistant containers. Avoid contact with aluminum.

Incompatible materials

- : Acids; Water; Metals (e.g. tin, aluminum, zinc and alloys containing these metals); Halogenated compounds; Nitrogen compounds.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
sodium hydroxide	2 mg/m ³ (Ceiling)	N/Av	2 mg/m ³	N/Av
Water	N/Av	N/Av	N/Av	N/Av

Exposure controls

Ventilation and engineering measures

- : Use only in well-ventilated areas. Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.

Respiratory protection

- : Respiratory protection is required if the concentrations exceed the TLV. NIOSH-approved respirators are recommended. A self contained breathing apparatus should be used in emergency situations or instances where exposure levels are not known. Seek advice from respiratory protection specialists. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02.



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- Skin protection** : Impervious gloves must be worn when using this product. Advice should be sought from glove suppliers. Wear as appropriate: Neoprene; Polyvinylchloride; Viton; Butyl rubber; Nitrile rubber; Polyethylene. Unsuitable material: polyvinyl alcohol. Wear chemically protective gloves (impervious), boots, aprons, and gauntlets to prevent prolonged or repeated skin contact.
- Eye / face protection** : Chemical splash goggles must be worn when handling this material. A full face shield may also be necessary.
- Other protective equipment** : An eyewash station and safety shower should be made available in the immediate working area. Other equipment may be required depending on workplace standards.
- General hygiene considerations** : Do not breathe fumes or mists. Do not ingest. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance** : Colourless liquid.
- Odour** : No odour.
- Odour threshold** : Not applicable.
- pH** : 14
- Melting/Freezing point** : Not available.
- Initial boiling point and boiling range** : 111°C (231.8°F)
- Flash point** : Not applicable.
- Flashpoint (Method)** : Not applicable.
- Evaporation rate (BuAe = 1)** : N/Av
- Flammability (solid, gas)** : Not applicable.
- Lower flammable limit (% by vol.)** : Not applicable.
- Upper flammable limit (% by vol.)** : Not applicable.
- Oxidizing properties** : None known.
- Explosive properties** : Not explosive
- Vapour pressure** : negligible
- Vapour density** : Not available.
- Relative density / Specific gravity** : 1.27-1.48
- Solubility in water** : Very soluble
- Other solubility(ies)** : Not available.
- Partition coefficient: n-octanol/water or Coefficient of water/oil distribution** : N/Av (dissociates)
- Auto-ignition temperature** : N/Av
- Decomposition temperature** : Not available.
- Viscosity** : N/Av
- Volatiles (% by weight)** : Not available.
- Volatile organic Compounds (VOC's)** : N/Av
- Absolute pressure of container** : N/Av
- Flame projection length** : N/Av



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Other physical/chemical comments

: None known or reported by the manufacturer.

SECTION 10. STABILITY AND REACTIVITY

- Reactivity** : Not normally reactive. May be corrosive to metals. Contact with most metals will generate flammable hydrogen gas. Contact with water will generate considerable heat.
- Chemical stability** : Material is stable under normal conditions.
- Possibility of hazardous reactions** : Hazardous polymerization does not occur.
- Conditions to avoid** : Avoid heat and open flame. Keep away from incompatibles. Keep container tightly closed when not in use. Avoid contact with water.
- Incompatible materials** : Acids; Water; Metals (e.g. tin, aluminum, zinc and alloys containing these metals); Halogenated compounds; Nitrogen compounds.
- Hazardous decomposition products** : None known, refer to hazardous combustion products in Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

- Routes of entry inhalation** : YES
- Routes of entry skin & eye** : YES
- Routes of entry Ingestion** : YES
- Routes of exposure skin absorption** : NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

- : May cause severe irritation to the nose, throat and respiratory tract. Symptoms may include coughing, choking and wheezing. Could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.

Sign and symptoms ingestion

- : May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death.

Sign and symptoms skin

- : This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Skin Irritation - Category 1 Causes severe skin burns and eye damage.

Sign and symptoms eyes

- : This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Eye Damage/Irritation - Category 1 Causes serious eye damage.

Potential Chronic Health Effects

- : Chronic skin contact with low concentrations may cause dermatitis.

Mutagenicity

- : Not expected to be mutagenic in humans.

Carcinogenicity

- : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects & Teratogenicity

- : Not expected to have other reproductive effects.

Sensitization to material

- : Not expected to be a skin or respiratory sensitizer.



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Specific target organ effects : Target Organs: Eyes, skin, respiratory system and digestive system.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Classification: Specific Target Organ Toxicity, Single Exposure -Category 3 (respiratory) May cause respiratory irritation.

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye and respiratory disorders.

Synergistic materials

: Not available.

Toxicological data

: There is no data available for this product.

<u>Chemical name</u>	<u>LC₅₀(4hr)</u>	<u>LD₅₀</u>	
	<u>inh, rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
sodium hydroxide	N/Av	N/Av	N/Av
Water	N/Av	>90 mL/kg	N/Av

Other important toxicological hazards

: None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. Toxicity is primarily associated with pH.

Ecotoxicity data:

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Fish</u>		
		<u>LC50 / 96h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
sodium hydroxide	1310-73-2	125 mg/L (Mosquito fish)	N/Av	None.
Water	7732-18-5	No information available.	No information available.	Not applicable.

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Daphnia</u>		
		<u>EC50 / 48h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
sodium hydroxide	1310-73-2	40 mg/L Water flea	N/Av	None.
Water	7732-18-5	No information available.	No information available.	Not applicable.



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<u>Ingredients</u>	CAS No	<u>Toxicity to Algae</u>		
		<u>EC50 / 96h or 72h</u>	<u>NOEC / 96h or 72h</u>	<u>M Factor</u>
sodium hydroxide	1310-73-2	N/Av	N/Av	None.
Water	7732-18-5	No information available.	No information available.	Not applicable.

Persistence and degradability

: The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulation potential

: No data is available on the product itself.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
sodium hydroxide (CAS 1310-73-2)	N/Av	N/Av
Water (CAS 7732-18-5)	N/Av	N/Av

Mobility in soil : No data is available on the product itself.

Other Adverse Environmental effects

: No data is available on the product itself.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal

: Handle waste according to recommendations in Section 7.




Methods of Disposal

: Dispose in accordance with all applicable federal, state, provincial and local regulations.

RCRA

: If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method.
For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14. TRANSPORTATION INFORMATION

<u>Regulatory Information</u>	<u>UN Number</u>	<u>UN proper shipping name</u>	<u>Transport hazard class(es)</u>	<u>Packing Group</u>	<u>Label</u>
TDG	UN1824	SODIUM HYDROXIDE SOLUTION	8	II	
TDG Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass. Under the TDGR, refer to Section 1.17 for additional exemption information, if shipping under this exemption.				
49CFR/DOT	UN1824	Sodium hydroxide solution	8	II	
49CFR/DOT Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass. Refer to 49 CFR Section 173.154.				
ICAO/IATA	UN1824	Sodium hydroxide solution	8	II	



Borden & Remington Corp
63 Water St. PO Box 2573
Fall River, MA, USA, 02722
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ICAO/IATA Additional information	Refer to ICAO/IATA Packing Instruction				
IMDG	UN1824	SODIUM HYDROXIDE SOLUTION	8	II	
IMDG Additional information	May be shipped as Limited Quantity, consult the IMDG regulations for details.				

Special precautions for user : None reported by the manufacturer.

Environmental hazards : See ECOLOGICAL INFORMATION, Section 12.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not available.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

Ingredients	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	de minimus Concentration
sodium hydroxide	1310-73-2	Yes	1000 lb/ 454 kg	None.	No	N/Ap
Water	7732-18-5	Yes	N/Ap	N/Av	No	N/Ap

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute) health hazard; Chronic Health Hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

Ingredients	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
sodium hydroxide	1310-73-2	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
Water	7732-18-5	No	N/Ap	No	No	No	No	No	No

Canadian Information:

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).



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International Information:

Components listed below are present on the following International Inventory list:

<u>Ingredients</u>	<u>CAS #</u>	<u>European EINECs</u>	<u>Australia AICS</u>	<u>Philippines PICCS</u>	<u>Japan ENCS</u>	<u>Korea KECI/KECL</u>	<u>China IECSC</u>	<u>NewZealand IOC</u>
sodium hydroxide	1310-73-2	215-185-5	Present	Present	(2)-1972; (1)-410	KE-31487	Present	HSR001547
Water	7732-18-5	231-791-2	Present	Listed	Listed	KE-35400	Present	Listed

SECTION 16. OTHER INFORMATION

Legend

: ACGIH: American Conference of Governmental Industrial Hygienists
CA: California
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DOT: Department of Transportation
EPA: Environmental Protection Agency
HMIS: Hazardous Materials Identification System
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
IMDG: International Maritime Dangerous Goods
Inh: Inhalation
LC: Lethal Concentration
LD: Lethal Dose
MA: Massachusetts
MN: Minnesota
N/Ap: Not Applicable
N/Av: Not Available
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NJ: New Jersey
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PA: Pennsylvania
PEL: Permissible exposure limit
RCRA: Resource Conservation and Recovery Act
RI: Rhode Island
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

References

: Canadian Centre for Occupational Health and Safety, CCIInfoWeb Databases, 2015 (Chempendium, RTECs, HSDB, INCHEM).
European Chemicals Agency, Classification Legislation, 2015
Material Safety Data Sheet from manufacturer.
OECD: Organisation for Economic Co-operation and Development, 2015

Preparation Date (mm/dd/yyyy)

: 10/09/2015



Borden & Remington Corp
63 Water St. PO Box 2573
Fall River, MA, USA, 02722
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Other special considerations for handling

: Provide adequate information, instruction and training for operators.

HMIS Rating

: * - Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

Health: *3 Flammability: 0 Reactivity: 1

NFPA Rating

0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

: Health: 3 Flammability: 0 Instability: 1 Special Hazards: None.

Prepared for:

Borden & Remington Corp
63 Water St.
Fall River, MA 02722
Telephone: 508-675-0096



Prepared by:

ICC The Compliance Center Inc.
Telephone: (888) 442-9628 (U.S.); (888) 977-4834 (Canada)
<http://www.thecompliancescenter.com>



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END OF DOCUMENT



Borden & Remington Corp
63 Water St. PO Box 2573
Fall River, MA, USA, 02722
Telephone: (508) 675 0096

Sulfuric Acid 71-100%

SDS Preparation Date (mm/dd/yyyy): 10/13/2015

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SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product identifier used on the label

: **Sulfuric Acid 71-100%**

Product Code(s)

: Not available.

Recommended use of the chemical and restrictions on use

: Reagent ;Chemical intermediate.
Use pattern: Professional Use Only
Recommended restrictions: None known.

Chemical family

: Inorganic acid

Name, address, and telephone number
of the supplier:

Borden & Remington Corp

63 Water St.
PO Box 2573
Fall River, MA, USA
02722

Supplier's Telephone #

: 508-675-0096

24 Hr. Emergency Tel #

: Chemtrec: 1-800-424-9300 (Within Continental U.S.); 703-527-3887.

Name, address, and telephone number of
the manufacturer:

Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Clear to cloudy liquid. Odorless.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification :

Corrosive to metals: Category 1

Acute toxicity, inhalation - Category 2 (mist)

Eye damage/irritation: Category 1

Skin corrosion/irritation: Category 1

Specific Target Organ Toxicity, Single Exposure -Category 3 (respiratory)

Label elements

Hazard pictogram(s)



Signal Word

DANGER!

Hazard statement(s)

May be corrosive to metals.

Fatal if inhaled.

Causes severe skin burns and eye damage.

May cause respiratory irritation.



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Precautionary statement(s)

Keep only in original container.
Wash thoroughly after handling.
Do not breathe mists.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/clothing and eye/face protection.
[In case of inadequate ventilation] wear respiratory protection.

If swallowed: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash contaminated clothing before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Immediately call a POISON CENTER or doctor/physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
Absorb spillage to prevent material damage.

Store in corrosive resistant container with a resistant inner liner.
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

Other hazards which do not result in classification:

Ingestion may cause severe irritation to the mouth, throat and stomach. Contact with metals may release small amounts of flammable hydrogen gas. Prolonged skin contact may cause dermatitis (rash), characterized by red, dry, itching skin. Prolonged or repeated inhalation of fumes or vapours, may cause chronic lung effects, such as bronchitis, and tooth enamel erosion. Chronic skin contact with low concentrations may cause dermatitis.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration</u>
Sulfuric acid	Battery acid; Hydrogen sulfate; Oil of vitriol	7664-93-9	71.0 - 100.0
Water	H2O	7732-18-5	Balance

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

- Ingestion* : Do NOT induce vomiting. Have victim rinse mouth with water, then give one to two glasses of water to drink. Seek immediate medical attention/advice. Never give anything by mouth if victim is unconscious.
- Inhalation* : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Seek immediate medical attention/advice.
- Skin contact* : Take off all contaminated clothing immediately. Immediately flush skin with gently flowing, running water for at least 20 minutes. Do not rub area of contact. Cover wound with sterile dressing. Seek immediate medical attention/advice. Wash contaminated clothing before reuse. Leather and shoes that have been contaminated with the solution may need to be destroyed.



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Eye contact : Immediately flush eyes with running water for at least 20 minutes. Protect unharmed eye. Seek immediate medical attention/advice.

Most important symptoms and effects, both acute and delayed

: May cause serious eye irritation or damage. Symptoms may include redness, pain, tearing and conjunctivitis. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death. May cause severe irritation to the nose, throat and respiratory tract. Symptoms may include coughing, choking and wheezing. Could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Prolonged or repeated inhalation of fumes or vapours, may cause chronic lung effects, such as bronchitis, and tooth enamel erosion.

Indication of any immediate medical attention and special treatment needed

: Immediate medical attention is required. Causes burns. Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water with caution. Contact with water will generate considerable heat.

Unsuitable extinguishing media

: Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture / Conditions of flammability

: Not considered flammable. Burning produces obnoxious and toxic fumes. Contact with metals may release small amounts of flammable hydrogen gas. Reacts violently with a wide variety of organic and inorganic chemicals including alcohol, carbides, chlorates, picrates, nitrates and metals. Contact with water will generate considerable heat.

Flammability classification (OSHA 29 CFR 1910.106)

: Non-flammable.

Hazardous combustion products

: Sulphur oxides. Carbon dioxide and carbon monoxide. Oxygen.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Special fire-fighting procedures

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. A full-body chemical resistant suit should be worn. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. Dike for water control. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Environmental precautions

: Do not allow material to contaminate ground water system. For large spills, dike the area to prevent spreading.

Methods and material for containment and cleaning up



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- : Remove all sources of ignition. Ventilate area of release. Stop spill or leak at source if safely possible. Dike for water control. Neutralize with sodium bicarbonate or a mixture of soda ash/slaked lime. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Contact the proper local authorities.

Special spill response procedures

- : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).

US CERCLA Reportable quantity (RQ): Sulfuric acid (1000 lbs / 454 kg)

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

- : Use in a well-ventilated area. Wear protective gloves/clothing and eye/face protection. See Section 8 for additional personal protection advice when handling this product. Do not ingest. Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and flame. Keep away from bases, metals and other incompatibles. Keep container tightly closed when not in use. Keep only in original container. Wash thoroughly after handling. During preparation or dilution, always add liquid slowly to water and with constant stirring.

Conditions for safe storage

- : Store in a cool, dry, well-ventilated area. Store locked up. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Store in corrosion-resistant containers. Keep only in original container.

Incompatible materials

- : Strong oxidizing agents; Metals (e.g. Aluminum, brass, copper); Alkalies; Aldehydes ; Reducing agents; Water; Organic materials; Acids Chlorate .

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
Sulfuric acid	0.2 mg/m ³ (thoracic fraction)	N/Av	1 mg/m ³	N/Av
Water	N/Av	N/Av	N/Av	N/Av

Exposure controls

Ventilation and engineering measures

- : Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.

Respiratory protection

- : If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Confirmation of which type of respirator is most suitable for the intended application should be obtained from respiratory protection suppliers. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02.

Skin protection

- : Wear chemically protective gloves (impervious), boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear impervious gloves, such as butyl rubber. Unsuitable material: polyvinyl alcohol. Advice should be sought from glove suppliers.

Eye / face protection

- : Chemical splash goggles must be worn when handling this material. A full face shield may also be necessary.



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- Other protective equipment** : Other equipment may be required depending on workplace standards. An eyewash station and safety shower should be made available in the immediate working area.
- General hygiene considerations** : Do not breathe mist or vapor. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove and wash contaminated clothing before re-use. Do not take contaminated clothing home.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance** : Clear, oily, colourless liquid
- Odour** : Odorless.
- Odour threshold** : N/Av
- pH** : <1.0
- Melting/Freezing point** : -40°C (-40°F)
- Initial boiling point and boiling range** : 102°C (215.6°F)
- Flash point** : Not applicable.
- Flashpoint (Method)** : Not applicable.
- Evaporation rate (BuAe = 1)** : Slower than ether.
- Flammability (solid, gas)** : Not applicable.
- Lower flammable limit (% by vol.)** : Not applicable.
- Upper flammable limit (% by vol.)** : Not applicable.
- Oxidizing properties** : None known.
- Explosive properties** : Not explosive
- Vapour pressure** : <0.3 mmHg @75°F
- Vapour density** : 3.4
- Relative density / Specific gravity** : 1.84
- Solubility in water** : Soluble
- Other solubility(ies)** : None known.
- Partition coefficient: n-octanol/water or Coefficient of water/oil distribution** : N/Av
- Auto-ignition temperature** : N/Av
- Decomposition temperature** : Not available.
- Viscosity** : N/Av
- Volatiles (% by weight)** : Not available.
- Volatile organic Compounds (VOC's)** : Not available.
- Absolute pressure of container** : N/Av
- Flame projection length** : N/Av
- Other physical/chemical comments** : None.

SECTION 10. STABILITY AND REACTIVITY



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- Reactivity** : Contact with metals may release small amounts of flammable hydrogen gas. Corrosive in contact with metals. Avoid contact with incompatible materials. Contact with water will generate considerable heat. Reacts vigorously, violently or explosively with many organic and inorganic chemicals, such as strong acids, acid chlorides, acid anhydrides, ketones, glycols, and organic peroxides.
- Chemical stability** : Stable under the recommended storage and handling conditions prescribed.
- Possibility of hazardous reactions** : Hazardous polymerization does not occur. Contact with metals may release small amounts of flammable hydrogen gas.
- Conditions to avoid** : Avoid heat and open flame. Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials.
- Incompatible materials** : Strong oxidizing agents; Metals (e.g. Aluminum, brass, copper); Alkalies; Aldehydes; Reducing agents; Water; Organic materials; Acids Chlorate . . .
- Hazardous decomposition products** : Decomposes at 340 deg C into sulfur trioxide and water.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

- Routes of entry inhalation** : YES
- Routes of entry skin & eye** : YES
- Routes of entry Ingestion** : YES
- Routes of exposure skin absorption** : NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

- : Fatal if inhaled. Inhalation of high concentrations of fumes or mists may cause severe irritation and corrosive damage to the nose, throat and upper respiratory tract. Symptoms may include coughing, choking and wheezing. Could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.

Sign and symptoms ingestion

- : May be harmful if swallowed. May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death.

Sign and symptoms skin

- : This material is classified as hazardous under OSHA regulations (29CFR 1910.1200) (Hazcom 2012). Classification: Skin corrosion/irritation: Category 1 Causes severe skin burns and eye damage. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring.

Sign and symptoms eyes

- : This material is classified as hazardous under OSHA regulations (29CFR 1910.1200) (Hazcom 2012). Classification: Eye damage/irritation: Category 1 Causes serious eye damage. Symptoms may include severe pain, tearing, redness, swelling and blurred vision. Contact may lead to permanent injury and blindness.

Potential Chronic Health Effects

- : Chronic skin contact with low concentrations may cause dermatitis. Prolonged or repeated inhalation of fumes or vapours, may cause chronic lung effects, such as bronchitis, and tooth enamel erosion.

Mutagenicity

- : Not expected to be mutagenic in humans.



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Carcinogenicity : This material is not classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Strong inorganic acid mist containing sulfuric acid is classified as a Group 1 Human Carcinogen by the IARC. However, this classification does not apply to liquid forms of sulfuric acid.

Reproductive effects & Teratogenicity

: Not expected to cause reproductive effects.

Sensitization to material : Not expected to be a skin or respiratory sensitizer.

Specific target organ effects : Target Organs:: Eyes, skin, respiratory system and digestive system.

This material is classified as hazardous under OSHA regulations (29CFR 1910.1200) (Hazcom 2012). Classification:

Specific target organ toxicity, single exposure -Category 3
May cause respiratory irritation.

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye and respiratory disorders.

Synergistic materials : Not available.

Toxicological data : See below for toxicological data on the substance.

The calculated ATE values for this mixture are:

ATE inhalation (mists) = 0.5 mg/L (75%)

<u>Chemical name</u>	<u>LC₅₀(4hr)</u>	<u>LD₅₀</u>	
	<u>inh, rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Sulfuric acid	0.375mg/L	2140 mg/kg	N/Av
Water	N/Av	>90 mL/kg	N/Av

Other important toxicological hazards

: None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

Ecotoxicity data:

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Fish</u>		
		<u>LC50 / 96h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
Sulfuric acid	7664-93-9	N/Av	N/Av	None.
Water	7732-18-5	No information available.	No information available.	Not applicable.



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<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Sulfuric acid	7664-93-9	N/Av	N/Av	None.
Water	7732-18-5	No information available.	No information available.	Not applicable.

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Sulfuric acid	7664-93-9	>100mg/L (Green algae)	N/Av	None.
Water	7732-18-5	No information available.	No information available.	Not applicable.

Persistence and degradability

: Biodegradation is not applicable to inorganic materials.

Bioaccumulation potential

: No data is available on the product itself.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Sulfuric acid (CAS 7664-93-9)	N/Av	no bioaccumulation
Water (CAS 7732-18-5)	N/Av	N/Av

Mobility in soil : No data is available on the product itself.

Other Adverse Environmental effects

: No additional information.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal

: Handle waste according to recommendations in Section 7. Empty containers retain residue (liquid and/or vapour) and can be dangerous.



Methods of Disposal

: Dispose in accordance with all applicable federal, state, provincial and local regulations.

RCRA

: If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	UN1830	SULFURIC ACID ; or SULPHURIC ACID	8	II	
49CFR/DOT Additional information	May be shipped as a limited quantity in receptacles not exceeding 1.0 Liters, according to 49 CFR 173.154.				
TDG	UN1830	SULPHURIC ACID	8	II	





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TDG Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass.				
ICAO/IATA Additional information	UN1830	Sulphuric acid	8	II	
	Refer to ICAO/IATA Packing Instruction				
IMDG Additional information	UN1830	SULFURIC ACID or SULPHURIC ACID	8	II	
	May be shipped as a limited quantity. Consult the IMDG regulations for more information.				

Special precautions for user : None known.

Environmental hazards : See ECOLOGICAL INFORMATION, Section 12.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not applicable.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Sulfuric acid	7664-93-9	Yes	1000 lb/ 454 kg	1000 lb TPQ	Yes	1%
Water	7732-18-5	Yes	N/Ap	N/Av	No	N/Ap

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Acute Health Hazard. Chronic Health Hazard

Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Sulfuric acid	7664-93-9	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
Water	7732-18-5	No	N/Ap	No	No	No	No	No	No



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Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

International Information:

Components listed below are present on the following International Inventory list:

Ingredients	CAS #	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Sulfuric acid	7664-93-9	231-639-5	Present	Present	(1)-724; (1)-430	KE-32570	Present	HSR001572, HSR001573, HSR001588 (dilution)
Water	7732-18-5	231-791-2	Present	Listed	Listed	KE-35400	Present	Listed

SECTION 16. OTHER INFORMATION

Legend

: ACGIH: American Conference of Governmental Industrial Hygienists
CA: California
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
DOT: Department of Transportation
EPA: Environmental Protection Agency
HMIS: Hazardous Materials Identification System
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
Inh: Inhalation
IUCLID: International Uniform Chemical Information Database
MA: Massachusetts
MN: Minnesota
MSHA: Mine Safety and Health Administration
N/Ap: Not Applicable
N/Av: Not Available
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NJ: New Jersey
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PA: Pennsylvania
PEL: Permissible exposure limit
RCRA: Resource Conservation and Recovery Act
RI: Rhode Island
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System



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References : Canadian Centre for Occupational Health and Safety, CCInfoWeb Databases, 2015
(Chempendium, RTECs, HSDB, INCHEM).
European Chemicals Agency, Classification Legislation, 2015
Material Safety Data Sheet from manufacturer
OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2015

Preparation Date (mm/dd/yyyy)

: 10/13/2015

Other special considerations for handling

: Provide adequate information, instruction and training for operators.

HMIS Rating

: * - Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

Health: 3 Flammability: 0 Reactivity: 2

NFPA Rating

0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

: Health: 3 Flammability: 0 Instability: 2 Special Hazards: None.

Prepared for:

Borden & Remington Corp
63 Water St.
Fall River, MA 02722
Telephone: 508-675-0096



Prepared by:

ICC The Compliance Center Inc.
Telephone: (888) 442-9628 (U.S.): (888) 977-4834 (Canada)
<http://www.thecompliancecenter.com>

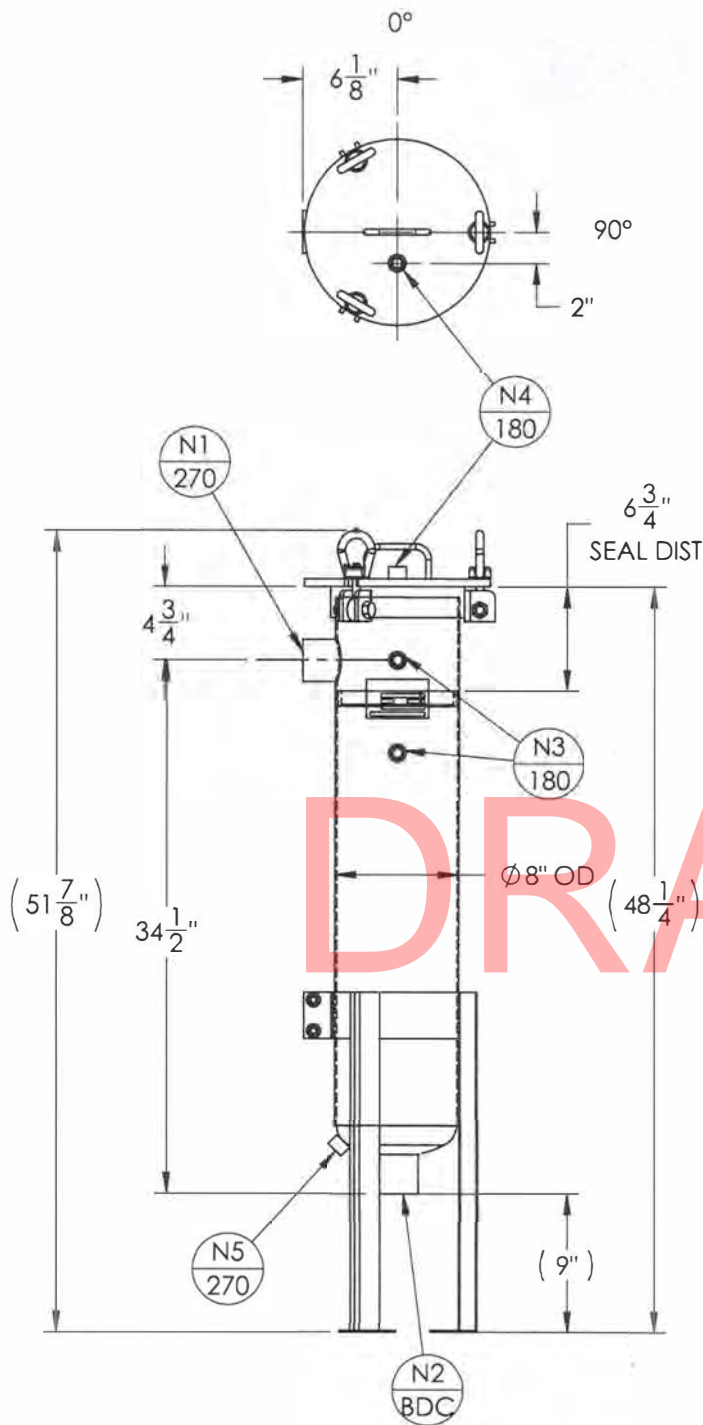


DISCLAIMER

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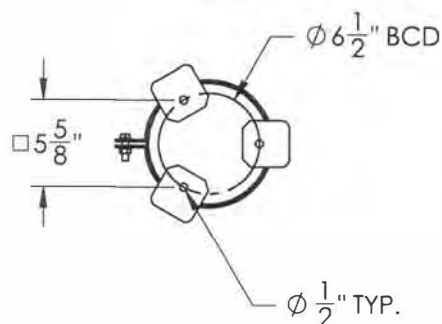
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NOZZLE SCHEDULE			
MARK	QTY	SIZE / RATING	DESCRIPTION
N1	1	2" 150# NPT	INLET
N2	1	2" 150# NPT	OUTLET
N3	2	1/2" 3000# NPT	PRESS GA
N4	1	1/2" 3000# NPT	VENT
N5	1	1/2" 3000# NPT	CLEAN DRAIN
N6	-	-	DIRTY DRAIN

VESSEL DESIGN CONDITIONS	
CODE:	BEST COMMERCIAL PRACTICE
M.A.W.P.:	150 PSI @ 250°F
M.A.E.P.:	15 PSI @ 250°F
CORROSION ALLOWANCE:	NONE
HYDROTEST PRESS:	195 PSI
STAMP:	'NC'
SERVICE:	NON LETHAL
PWHT:	N/A
RADIOGRAPHY:	N/A
MATERIAL:	SS 304/L
GASKET:	BUNA-N

DRY WEIGHT: 77.62 #'s
 FLOODED WEIGHT: 140 #'s
 SHIPPING WEIGHT: 100 #'s
 VESSEL VOLUME: 1.0 C.F.



- NOTES:
- VESSEL WILL HOUSE (QTY=1) DOUBLE LENGTH BASKET.

REV.	DATE	REVISION	DRAWN	APP'D

<p>89 Crawford Street Leominster, MA 01453 Tel: 774.450.7177 Fax: 888.835.0617</p>	<p>LRT Provided Bag Filter Housing</p> <p>EQUIPMENT: BAG FILTER HOUSING (EB SERIES)</p> <p>MODEL NO: S4EB112-2P-SW</p> <p>CUSTOMER:</p>
--	--

PARENT: NONE	DRAWN: CR	DATE: JAN 13 2011	JOB No. V-	DWG. No. 001-0123	REV. No. 0
PAGE: 1 OF 4	CHK'D: JM	SCALE: NTS			



Polyester Liquid Filter Bag



Features

- * Polyester liquid bag filter are available with a carbon steel ring, stainless steel ring or plastic flanges.
- * Heavy-duty handle eases installation and removal
- * Metal ring sewn into bag top for increased durability and positive sealing
- * Wide array of media fibers to meet needed temperature and micron specifications

Applications

Polyester liquid filter bags can be used in the filtering of a wide array of industrial and commercial process fluids

Sizes

Our liquid filter bags are available for all common liquid bag housings. Dimensions range from 4.12" diameter X 8" length thru 9" diameter X 32" length.

Micron Ratings

Available fibers range from 1 to 1500 microns

Options

- * Bag finish or covers for strict migration requirements.
- * Plastic top O.E.M. replacements
- * Multi-layered filtering capabilities for higher dirt holding capacities

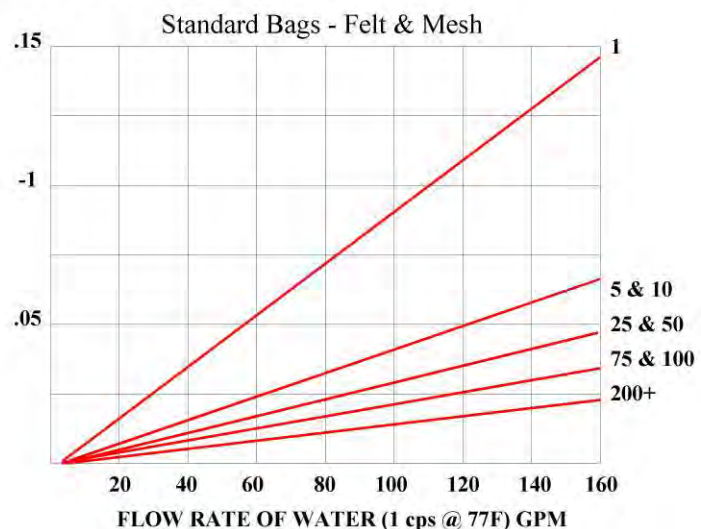
Optional Filter Media

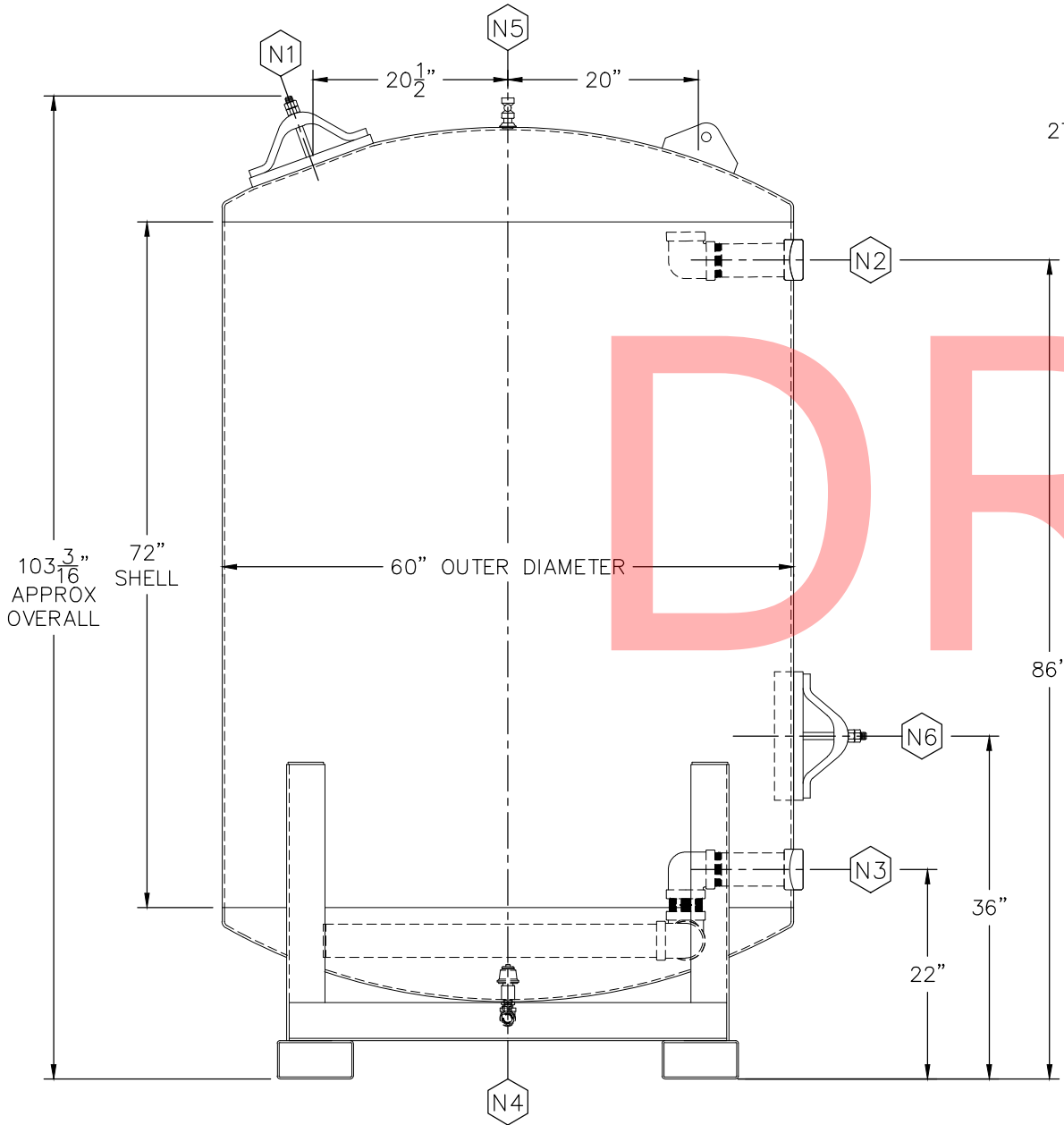
Felt: Nomex, Polyester, Polypropylene

Monofilament: Nylon, Polyester, Polypropylene

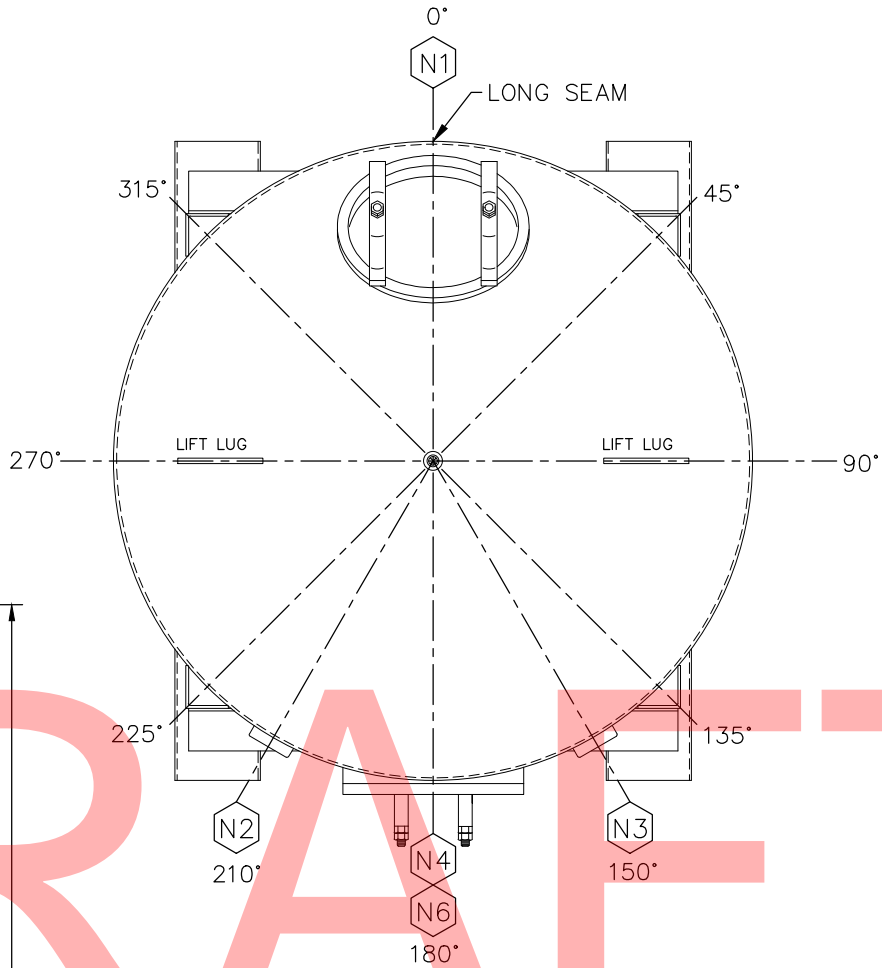
Multifilament: Nylon, Polyester

Polypropylene: Oil Removal





ELEVATION VIEW
NOT TRUE ORIENTATION



PLAN VIEW
TRUE ORIENTATION

SCHEDULE OF OPENINGS		
ID	DESCRIPTION	SERVICE
N1	14" x 18" ELLIPTICAL MANWAY	UPPER BED ACCESS
N2	3" 3000# FNPT FULL COUPLING	PROCESS INFLUENT
N3	3" 3000# FNPT FULL COUPLING	PROCESS EFFLUENT
N4	1/2" 3000# FNPT FULL COUPLING	DRAIN w/ BALL VALVE
N5	1/4" 150# FNPT TANK FLANGE	VENT w/ VALVE
N6	14" x 18" ELLIPTICAL MANWAY	LOWER BED ACCESS

VESSEL DESIGN DATA			
VESSEL REGISTRATION	N/A	YEAR BUILT	NOT YET BUILT
VESSEL CONSTRUCTION	NON-CODE	VESSEL SERIAL NUMBER	TBD
INTERNAL DESIGN PRESSURE	75 PSIG	CAPACITY (VOLUME)	1064.00 gal
INTERNAL DESIGN TEMP.	140 DEG. F	WEIGHT (EMPTY)	1922 lbs
EXTERNAL DESIGN PRESSURE	ATMOSPHERIC	WEIGHT (FULL)	12924 lbs
OPERATING PRESSURE	N/A	SHELL 1 MATERIAL	SA-36 ROLLED PLATE NOM. TH. = 0.25"
OPERATING TEMP.	N/A	SHELL 2 MATERIAL	N/A
MIN. DESIGN METAL TEMP.	-20 DEG. F @ 75 PSIG	TOP HEAD MATERIAL	SA-36 HOT FORMED NOM. TH. = 0.25"
MAWP (NEW & COLD)	TBD	BOTTOM HEAD MATERIAL	SA-36 HOT FORMED NOM. TH. = 0.25"
MAWP (HOT & CORRODED)	TBD	NOZZLES NECKS/FLANGES	SA-106-B, SA-105, SA-312-304
HYDROSTATIC TEST PRESSURE	N/A	GASKETS	BUNA-N
HYDROSTATIC TEST MEDIUM	N/A	INTERNALS	STAINLESS STEEL
CORROSION ALLOWANCE	NONE	SURFACE PREP INTERNAL	SSPC-SP10
RADIOGRAPHY	NONE	SURFACE PREP EXTERNAL	SSPC-SP6
POST WELD HEAT TREAT.	N/A	INTERNAL COATING	CARBOLINE CARBOGUARD 635 5-10 MILS DFT
MATERIAL IMPACT TESTS	N/A	EXTERNAL PRIMER	CARBOLINE CARBOGUARD 635 5-10 MILS DFT
MATERIAL HARDNESS	N/A	EXTERNAL PAINT/COATING	CARBOLINE CARBOTHANE 8845(GREEN)3-5 MILS DFT



REV NO	REVISION NOTE	DATE	SIGNATURE
1			
2			
3			
4			
5			
CUSTOMER		JOB #	DATE
DESIGNED BY		HPAF-3000	
APPROVED BY		QUANTITY	UNITS
		DRAWING #	



89 Crawford Street
 Leominster, Massachusetts 01453
 Tel: 774.450.7177
 Fax: 888.835.0617
 www.lrt-llc.net

FILTRATION MEDIA :

8x30 RE-ACTIVATED CARBON

4x10 RE-ACTIVATED CARBON

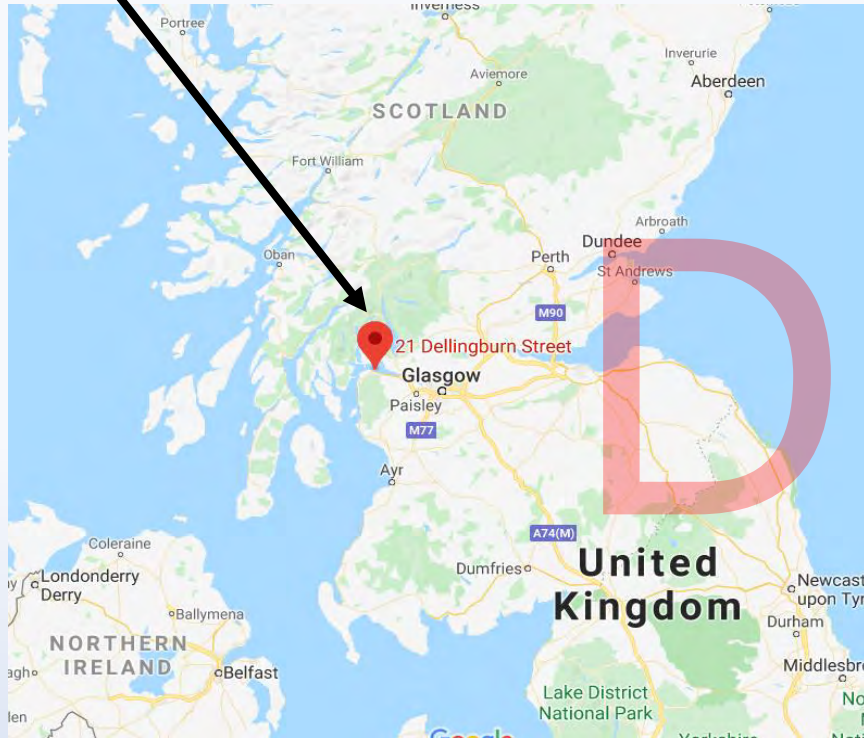
GENERAL DESCRIPTION

Select Re-Activated carbon from domestic sources is quality screened during our purchasing process for activity, density and fines. The use of re-activated carbon is recommended as a lower cost alternative for most sites where drinking water quality is not necessary. In many cases our re-activated carbon meets and exceeds imported virgin carbon. In addition all carbon either sold by itself or installed in our filtration units traced by lot number to the installation or sale.

8x30 (Liquid Phase) Standard Specifications:	Standard	Value
Iodine Number	ASTM D-4607	800 Minimum
Moisture Content	ASTM D-2867	5% Maximum (as packed)
Particle Size	ASTM D-2862	8x30 US Mesh
Ash		10% Maximum
Total Surface Area (N2BET)		1050 Minimum
Pore Volume (cc/g)		0.75

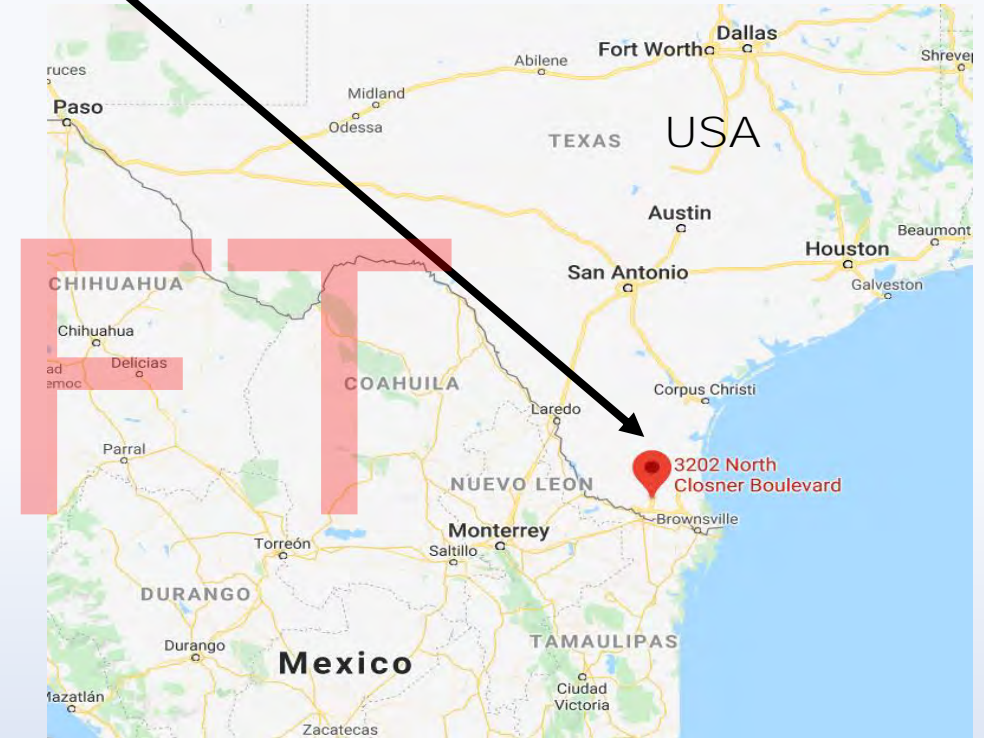
4*10 (Vapor Phase) Standard Specifications:	Standard	Value
Carbon Tetrachloride Activity Level	ASTM D-3467	40 Minimum
Moisture Content	ASTM D-2867	5% Maximum (as packed)
Particle Size	ASTM D-2862	4x10 US Mesh
Ash		10% Maximum
Total Surface Area (N2BET)		1050 Minimum
Pore Volume (cc/g)		0.75

- Brimac Char Inc. Scotland-1825.



21 Dellingburn Street, Greenock, Inverclyde,
Scotland PA15 4TP, United Kingdom
www.brimacchar.com

- Brimac Char Inc. United State -2017.



3202 North Closner Boulevard, Edinburg, Texas 78541,
United States
www.brimacchar.com

Filtration Media to Remove

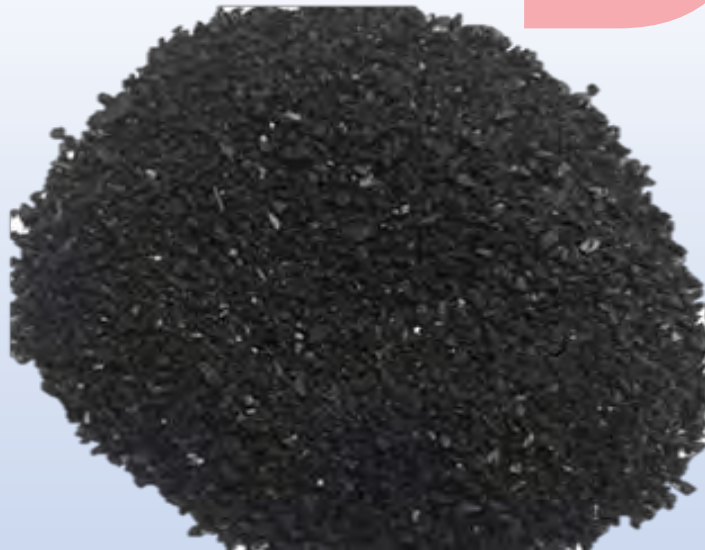
- Arsenic
- Manganese
- Iron
- Lead
- And other Heavy Metals



Filtration Media to Remove

- Fluorine
- Fluoride
- Chlorine
- Color
- Odor





Large Stock

- Alamo Texas warehouse

Brimac Bone Char?:“A porous black solid, consisting of an amorphous form of carbon, obtained as a residue when wood, bone, or other organic matter is heated in the absence of air.”

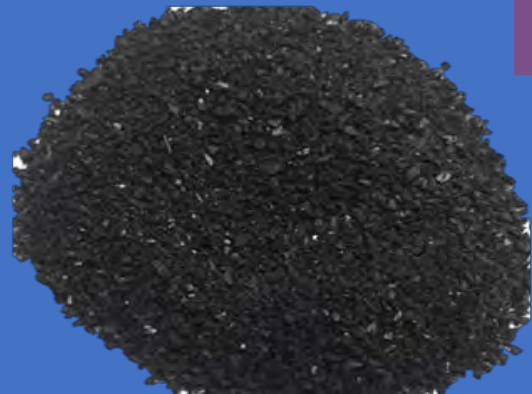
Charcoal is mostly pure carbon, it is produced by heating organic material (Wood, Coal, Bone and other fibrous material) in the absence of Oxygen (pyrolysis). This removes water and the volatile chemicals from the material. The resulting product contains carbon and some residual chemicals from the original source material. So depending on the source material each type of charcoal, have different chemical properties.

Bone Char is a unique form of activated carbon, due to the nature of the raw material. The carbonized material possess great mechanical strength and improved adsorption of many chemicals, e.g. Fluorine, Chlorine, Lead and many more.

Its main use for many years has been in sugar refining, where it has been used to decolorize and remove other mineral impurities.

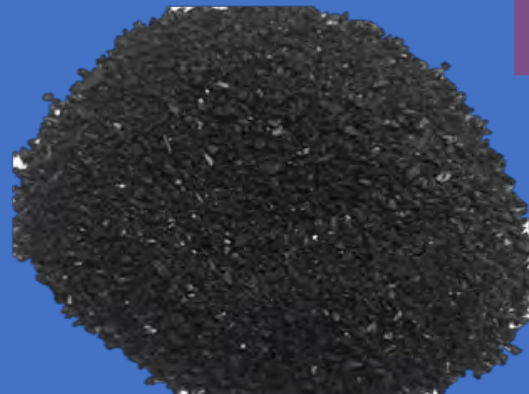
Bone Char is also an effective water filter media, as its ability to remove many heavy metals is greater than plain activated carbon. Most of these heavy metals are neurotoxins and pose significant hazards to human health.

Brimac Bone Char Spec



Brimac – Bone Charcoal Product Specifications				
Typical Product Analysis	Values			
	Min	Max	Unit	
Carbon	8	11	%	
Acid Insoluble Ash	---	3	%	
Moisture	----	5	%	
Calcium Carbonate	6	9	%	
Calcium Sulphate	0.1/0.22	0.2	%	
Water Soluble Phosphate	0.003	---	As P205, %	
Phosphate Soluble	16.5	---	As P205, %	
Iron	---	0.1	As Fe203, %	
Hydroxyapatite (Tri-calcium phosphate)	70	76	%	
Total Surface Area	80	120	m2/g	
Carbon Surface Area	40	60	m2/g	
Bulk Density	550/35	700/44	Kg/m3, Lb/ft3	
Particle Size Range				
Grade	5/8	8/24	20/60	Fines
Particle Size Range (mm)	1.70/4.00	0.60/1.00	0.25/1.00	0.075/0.60
Oversize Maximum (%)	10	5	15	5
Undersize Maximum (%)	5	5	2	N/A
Mean Particle Diameter (mm)	2.55	1.73	0.635	0.255

Metal Removal



Typical Metals Removal Rates

Parameter	% Removal	Parameter	% Removal
Aluminum (Al)	> 90%	Manganese (Mn)	> 99%
Antimony (Sb)	> 90%	Nickel (Ni)	> 99%
Arsenic (As)	> 90%	Phosphorus (P)	> 99%
Barium (Ba)	> 91%	Silicon (Si)	> 90%
Beryllium (Be)	> 92%	Silver (Ag)	> 94%
Bismuth (Bi)	> 93%	Strontium (Sr)	> 94%
Boron (B)	> 86%	Thallium (Tl)	> 90%
Cadmium (Cd)	> 92%	Titanium (Ti)	> 68%
Chromium (Cr)	> 96%	Tungsten (W)	> 90%
Cobalt (Co)	> 90%	Vanadium (V)	> 92%
Copper (Cu)	> 91%	Zinc (Zn)	> 99%
Iron (Fe)	> 99%	Zirconium (Zr)	> 95%
Lead (Pb)	> 90%		

Typical Other Reduction Property Reductions

Parameter	% Reduction
Chemical Oxygen Demand	> 70%
Biological Oxygen Demand	> 60%
Susp. Solids (TSS) 104 Deg C	> 40%

Benefits Using Brimac Charcoal



a) Removal of organic and inorganic contaminants in one process, often without any need for chemical pre-treatment.

b) Virtually maintenance free operation, suitable for remote or un-manned sites.

c) Unique buffering action which maintains alkalinity in the adsorbate.

d) Significant reduction in potable water chlorine demand thereby minimizing the amount of chlorine used for final chlorination and producing a much more stable chlorine residual that is easier to maintain.

e) Remove the heavy metals

This also results in lower levels of Trihalomethanes in the treated water.

e) BRIMAC Charcoal meets the approval standards: NSF, FDA, KOSHER.

Applications



BRIMAC charcoal is a cost-effective adsorbent for use in :

- ☐ Potable Water Treatment
- ☐ Drinking Water and Food process
- ☐ Wastewater Treatment
- ☐ Industrial Process
- ☐ Sugar Refinery
- ☐ Aquaculture
- ☐ Fertilizer

Metals Removal with TrueBlue™

Contaminant Removal

1 H Hydrogen																	2 He Helium	
3 Li Lithium	4 Be Beryllium																	
11 Na Sodium	12 Mg Magnesium																	
19 K Potassium	20 Ca Calcium	21 Sc Scandium	22 Ti Titanium	23 V Vanadium	24 Cr Chromium	25 Mn Manganese	26 Fe Iron	27 Co Cobalt	28 Ni Nickel	29 Cu Copper	30 Zn Zinc	31 Ga Gallium	32 Ge Germanium	33 As Arsenic	34 Se Selenium	35 Br Bromine	36 Kr Krypton	
37 Rb Rubidium	38 Sr Strontium	39 Y Yttrium	40 Zr Zirconium	41 Nb Niobium	42 Mo Molybdenum	43 Tc Technetium	44 Ru Ruthenium	45 Rh Rhodium	46 Pd Palladium	47 Ag Silver	48 Cd Cadmium	49 In Indium	50 Sn Tin	51 Sb Antimony	52 Te Tellurium	53 I Iodine	54 Xe Xenon	
55 Cs Cesium	56 Ba Barium	Lanthanides		72 Hf Hafnium	73 Ta Tantalum	74 W Tungsten	75 Re Rhenium	76 Os Osmium	77 Ir Iridium	78 Pt Platinum	79 Au Gold	80 Hg Mercury	81 Tl Thallium	82 Pb Lead	83 Bi Bismuth	84 Po Polonium	85 At Astatine	86 Rn Radon
87 Fr Francium	88 Ra Radium	Actinides		104 Rf Rutherfordium	105 Db Dubnium	106 Sg Seaborgium	107 Bh Bohrium	108 Hs Hassium	109 Mt Meitnerium	110 Ds Darmstadtium	111 Rg Roentgenium	112 Cn Copernicium	113 Uut Ununtrium*	114 Uuq Ununquadium*	115 Uup Ununpentium*	116 Uuh Ununhexium*	117 Uus Ununseptium*	118 Uuo Unuoctium*

Best Removal

Transition Metals

Effective Removal

Basic Metals

Alkaline Earth

Limited Removal

Semi-Metals

Non-Metals

Halogens

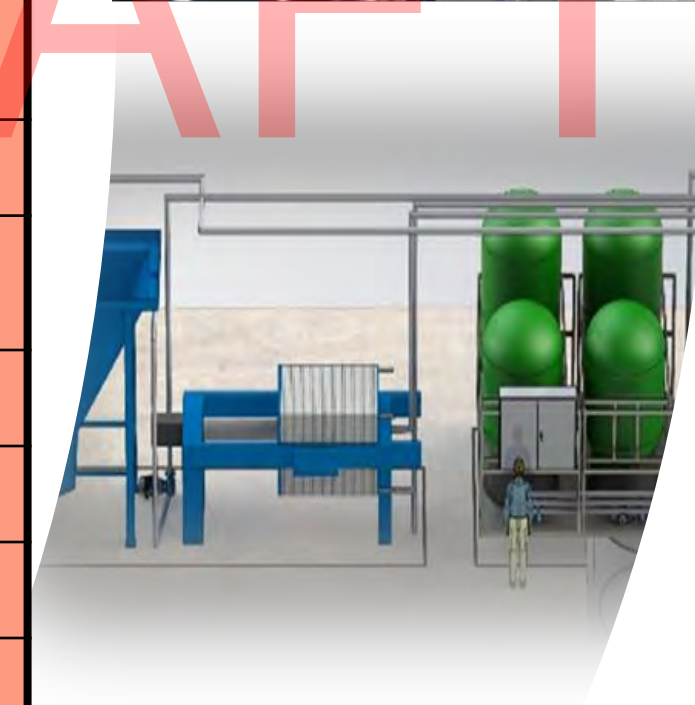
No Removal

Noble Gases

Alkali Metal

Granulate Brimac Char (GAC) Water Grade

Parameter	Brimac Char		Membranes		Chemical Systems	
Capital Cost	Moderate	-	High	x	Moderate	-
Through Life Cost	Moderate	-	Moderate	-	High	x
Treatment Efficiency	Excellent	✓	Moderate	-	Poor	x
Cleaning Regime	Minimal	✓	Frequent CIP	-	Moderate	-
Waste Stream	OK for discharge	✓	Concentrated – disposal difficult	x	Concentrated – disposal difficult	x
Re-uses	Many possibilities	✓	Many possibilities	✓	Few possibilities	x
Treatment Streams	Treats combined streams	✓	Treats only rinse streams	✓	Treats combined streams	✓
Influent Quality Tolerance	High	✓	Moderate	-	Low	x
Maintenance Level	Low	✓	High	x	High	x
Environmental Impact	Low	✓	Moderate	-	High	x
Overall	Excellent	✓	Moderate	-	Poor	x





Granulate Brimac Char (GAC) Water Grade

- Potable Water and Drink Water

- Remove Manganese
- Remove Iron
- Remove Fluorine
- Remove Arsenic
- Remove Copper
- Remove Aluminum
- Remove Chlorine
- Remove Color
- Remove Odor





**Granulate Brimac
Char(GAC) Sugar
Grade**

- Sugar Refinery
- Color Removal
- Ash Removal
- Great Performance



Brimac

Bone Char Media

For the Cost-Effective Removal of Metals,

Colour and Large Organics

About Brimac Char Inc

Brimac Char Inc. is a unique industrial consultancy with a strong history in the areas of organics & heavy metals removal from potable water and industrial effluent streams.

Our aim is to give businesses the ability to turn environmental and technical problems into business benefits by improving performance and efficiency.

The services we offer (from consultancy, innovation and implementation) are backed by the expertise of our people, partners, laboratory, and manufacturing facilities.

Benefits of using Brimac Char:

- Removal of organic and inorganic contaminants in one process, often without any need for chemical pre-treatment
- Removes metals, naturally occurring colour and large organics (humic and fulvic acids) that can blind the pores of GAC(Granular Activated Carbon).
- Significant though-life cost saving against Ion Exchange.
- Robust, low maintenance process suitable for remote or un-manned sites
- Can reduce chlorine demand and levels of Trihalomethanes in potable water.

Applications

INDUSTRIAL WATER

- Metallurgical
- Chemicals
- Polishing of industrial and trade effluents prior to disposal to sewer, river or re-cycling.

POTABLE WATER

- Pharmaceutical
- Foodstuffs
- Beverages
- Dairies
- Municipal treatment works
- Remote sites
- Private supplies
- Farms
- Domestic point of entry and point of use

FEATURES OF BRIMAC CHAR

Key Features

- Unique properties of adsorbing large organic molecules, colour and dissolved metals.
- Unique combination of ion exchange and adsorption characteristics
- Brimac Char is not activated carbon and can address contaminants that GAC handles poorly.
- Brimac Char contact time is typically 3 times longer than Carbon/GAC
- Brimac Char is a unique material consisting of a mixture of elemental carbon and calcium

hydroxyapatite with a predominantly mesoporous to macroporous structure which has the unique properties of adsorbing large organic molecules, color and dissolved metals from effluent waters.

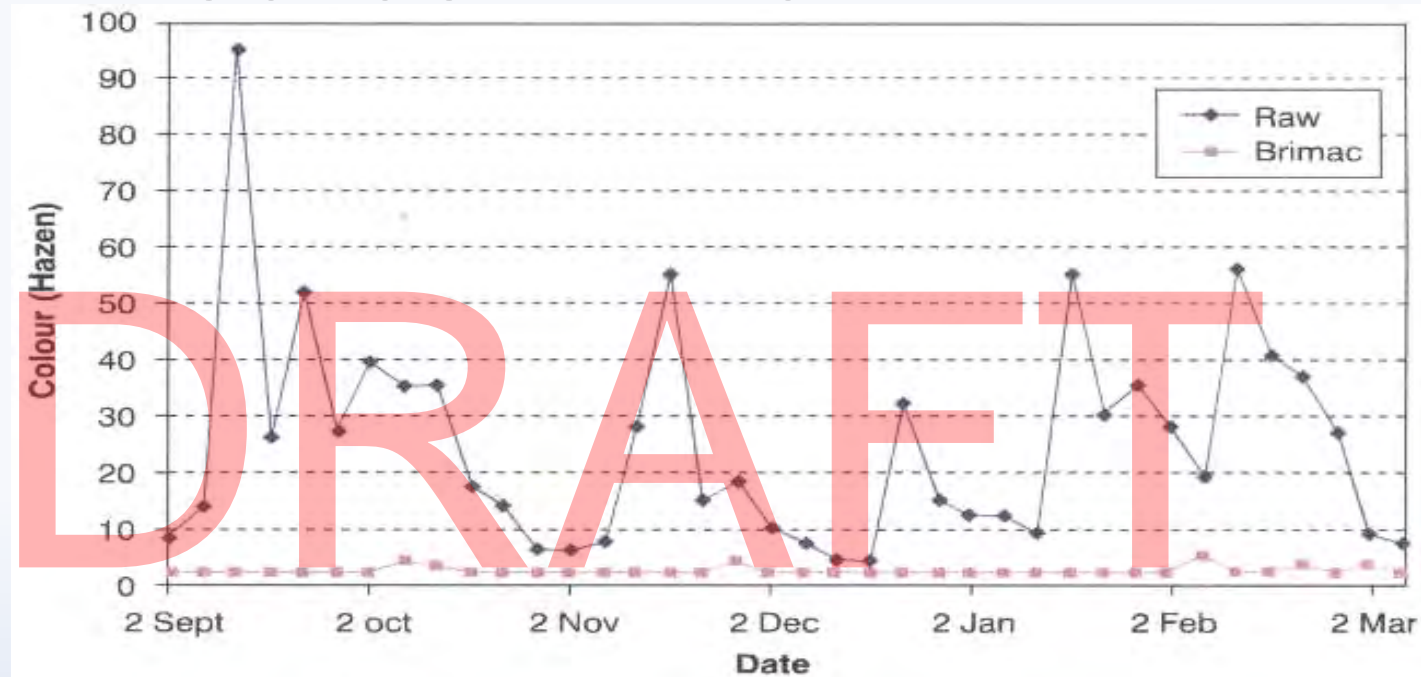
- Brimac Char comprises two complementary components:
 - 1) A carbon surface (around 10% by weight of the finished product) which adsorbs weakly anionic molecules
 - 2) A hydroxyapatite lattice - $\text{Ca}_{10}(\text{PO}_4)_6(\text{OH})_2$ which adsorbs strongly charged molecules together with many inorganic ions
- The manufacturing process creates a porous structure of a wide range of pore sizes within both the carbon and hydroxyapatite components. The total surface of Brimac HA is approximately 100 m² /g (50% of which is attributable to the carbon content) with a larger pore size range than GAC. Unlike charcoals and activated carbons this porosity is achieved totally by thermal means without the use of any other chemical additives

- Brimac Char (Potable Water Grade) is further processed to ensure no taste is added to the water. See page 6
- Because Brimac Char adsorption process is different to GAC, a Mass Transfer Zone model is used to size the plant. Empty bed contact times are typically 3 times that of GAC.
- Combinations of metals will change Brimac Char performance characteristics. Brimac can conduct characterization trials in our in-house laboratory to determine specific removal rates of combined contaminants.

METAL REMOVAL

Metal	Capacity mg/g	Linear velocity m/hr	Removal efficiency
Aluminium	24	1	>80
Arsenic III	30	0.5	>80
Arsenic V	26	0.5	>80
Cadmium	15	0.5	>80
Chromium III	15	0.5	>80
Chromium IV	8	0.5	~50
Copper	50	3	>90
Iron	30	3	>80
Lead	151	3	>80
Manganese	50	3	>80
Nickel	45	3	>90
Silver	**	0.5	~50#
Zinc	37	3	>90

COLOUR REMOVAL



Comparison of Brimac HA with GAC and Ion Exchange

	Brimac Char	GAC	Ion exchange
Flow rate (m/hr)	Up to 3	Up to 12	Typically 25
Surface area(m ² /g)	100	1000	Up to 750
Pore size (nm)	7.5 – 60000	0.5 - 5000	2 - 50
Process Waste	Land fill	Regenerable / Landfill	Liquid effluent

How Brimac Char is used?:

Brimac Char can be used in granular form in fixed bed systems, either by itself or in conjunction with other media e.g. sand or granular activated carbon as in:

- Rapid gravity filters
- Pressure filters
- Slow sand filters
- Cartridges
- Small modular containers

DRAFT

Powdered material may also be used in conjunction with suitable dosing and filtration systems.

Are there pH limits?:

For optimal performance the stream pH should be > 4.5 . Lower pH will attack the hydroxyapatite structure. The upper pH limit will be determined by the point at which precipitation starts.

What is the maximum level of suspended solids allowed?:

Suspended solids must be < 50 ppm and smaller than $10\text{ }\mu\text{m}$ to prevent the bed becoming blocked with particulates.

Pre-filtration may be needed to achieve this, depending on the nature of the suspended solids in the feed stream.

What level of contaminants will Brimac Char treat?:

Brimac Char is most economic when used as a polishing adsorbent. Contaminants at levels above 20 ppm will typically require pre – treatment by other means such as flocculation, clarification, precipitation or filtration.

What backwash flows are used?:

Backwashing is not required if the influent stream is properly filtered. Backwashing will tumble the bed and disrupt the mass transfer zone, adversely affecting performance and operational life.

Can Brimac Char be reactivated like GAC?:

Brimac Char is different to GAC and due to the mechanisms of adsorption is not easily reactivated.

What is the best way to dispose of Brimac Char?:

As contaminants are firmly bound to the Brimac Char, it is highly resistant to leaching. Spent material can be disposed of in landfill disposal sites subject to local statutory regulations.

BRIMAC Char

Europe:
EDQM – Manufactured in accordance with BS EN14456:2004 for Potable Water Treatment Certified by European Directorate for the Quality of Medicines

USA : Certified by NSF to NSF/ANSI standard 61 for Potable Water treatment

PROCESS DESIGN GUIDELINES

- Brimac Char is normally used at minimum bed depth of 500 mm.
- Underbed and strainers are used in the same way as for GAC or ion exchange media.
- For single metal removal the velocity through the bed is dependent on the metal species to be removed and is typically one third that through GAC.
- For colour removal in potable water systems, velocities are in the same range as used in slow sand filters, 0.1 to 0.5 m/hr. Metals will also be removed.
- A liquid cushion should be maintained above the Brimac Char to minimise the disturbance of the media by the influent stream.

LEAD/LAG SYSTEMS

As with non regenerable mixed bed systems, Brimac Char can be used in dual Adsorber with a sampling point between the two. The primary Adsorber is run until influent concentration of the contaminant is measured at the sampling point between the two units. At this point the second unit is switched over to become the primary Adsorber and a fresh Adsorber is installed in the secondary position.

QUALITY ASSURANCE

Brimac Char Media is manufactured under an ISO 9001:2018 approved quality system.

TECHNICAL SERVICES

A full technical back up service is available in the form of technical advice, research and development, laboratory trial and pilot plant facilities.

Technical Data Sheets, Material Safety Data Sheets and “In to service” specifications are available separately.

Brimac Case Studies

- 1. Colour Removal
- 1. Colour, Iron & Aluminum Removal
- 1. Manganese Removal

1. Colour removal

Brimac Bone Char compared with carbon (GAC)

The Challenge

A large water sample was taken from a raw surface water source containing high levels of humic and fulvic acid colorants. The chosen samples colour level was exceptionally high (165 hazen) and therefore provided an accelerated test comparison between carbon and Brimac media.

The water sample was fed at a constant velocity of 0.2m/hr through separate columns of GAC and ***Brimac Bone Char***. The GAC used is sold widely in the UK for drinking water treatment.

Conclusion

- Rapid, almost immediate breakthrough of colour was observed in the GAC column.
- For this water sample, ***Brimac Bone Char*** has a colour removal capacity of up to 5 times that of GAC.
- As most operating cost (OPEX) is associated with the labor and equipment used to change out granular media, ***Brimac Bone Char*** can provide dramatic savings in operating costs over GAC.

DRAFT

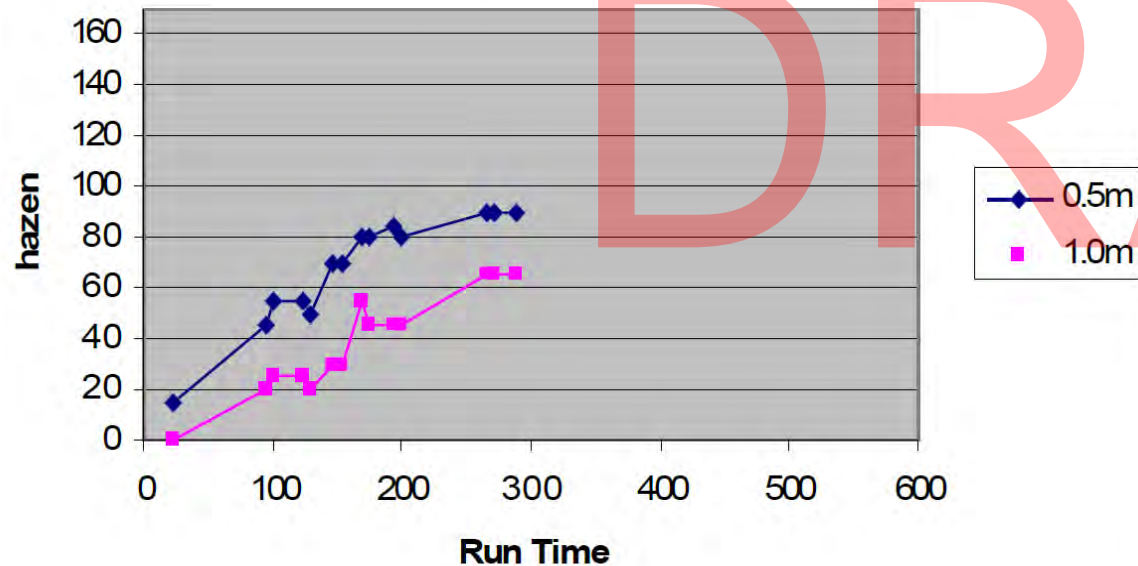
Results

The graphed results show measured colour (in hazen) at 0.5m and 1.0m bed depth for GAC and ***Brimac Bone Char***

Colour Removal

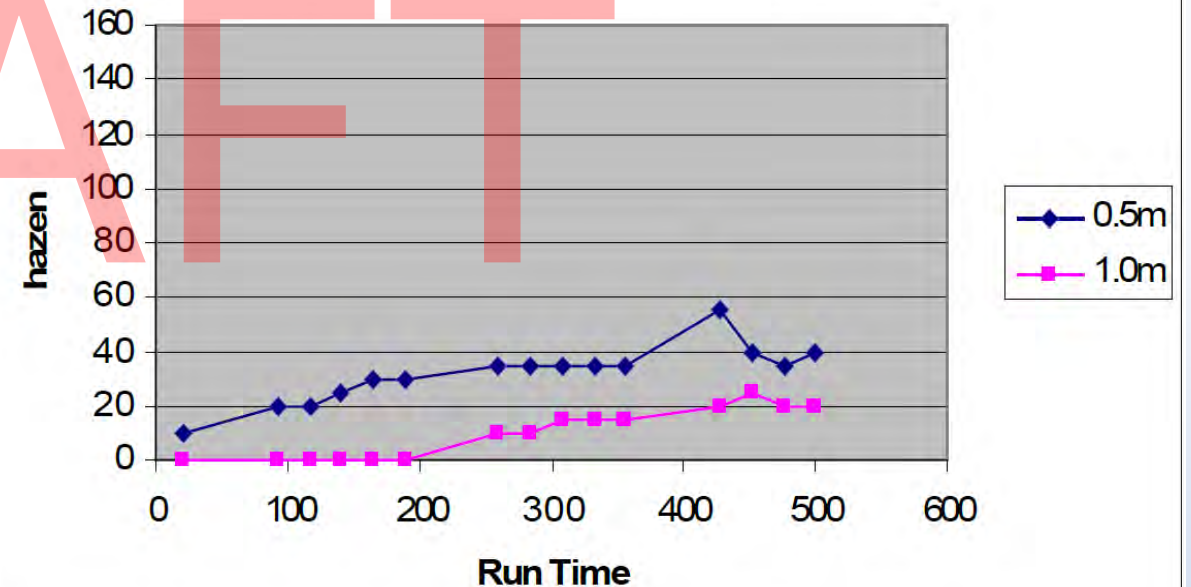
Carbon GAC

Carbon (GAC)-Treated Water Colour



Brimac Bone Char

Brimac 022060 -Treated Water Colour



1. Colour, iron and aluminum removal

The Company

A large municipal water company providing water and sewerage services over a wide area with difficult geography.

Challenge

Several unconnected, remote water treatment works with high colour, iron and aluminium levels. The works supplies the local population through small community distribution. Current treatment and raw water condition meant that the water quality regularly failed drinking water standards.

Solution

Six slow sand filters containing **Brimac Bone Char** adsorption media were installed in the mid 1990's. **Brimac Bone Char** is manufactured specifically for the removal of colour, dissolved heavy metals and THM precursors for potable water applications. It is approved for drinking water purification throughout Europe and the USA.

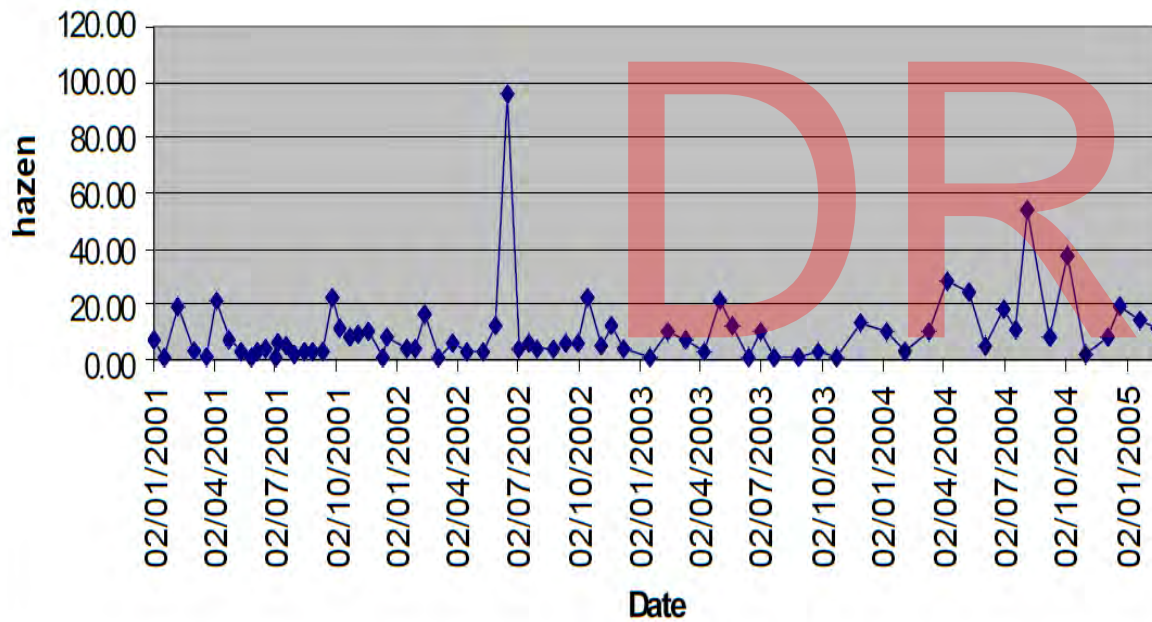
Results and conclusion

- Consistent colour, iron and aluminum removal even when levels spike
- **Brimac Bone Char** is a reliable solution for removing colour, heavy metals or both - all in one granular material.

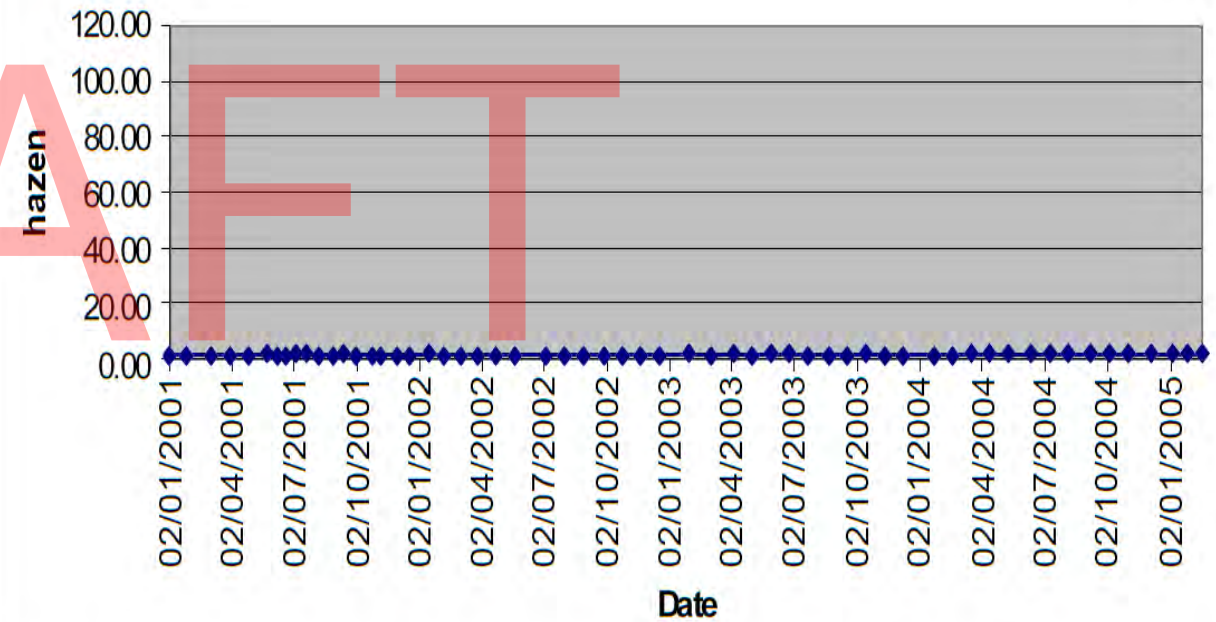
The graphed results show raw water quality, and final water quality after treatment with **Brimac Bone Char**.

Colour Removal

Raw Water - Colour

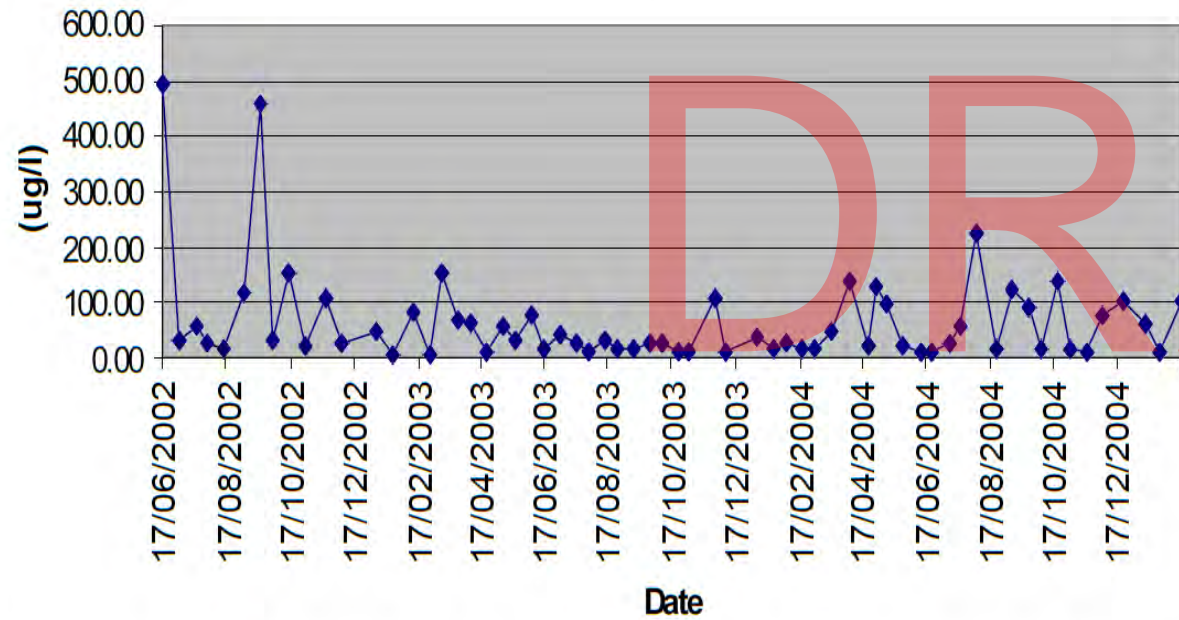


Final water - Colour

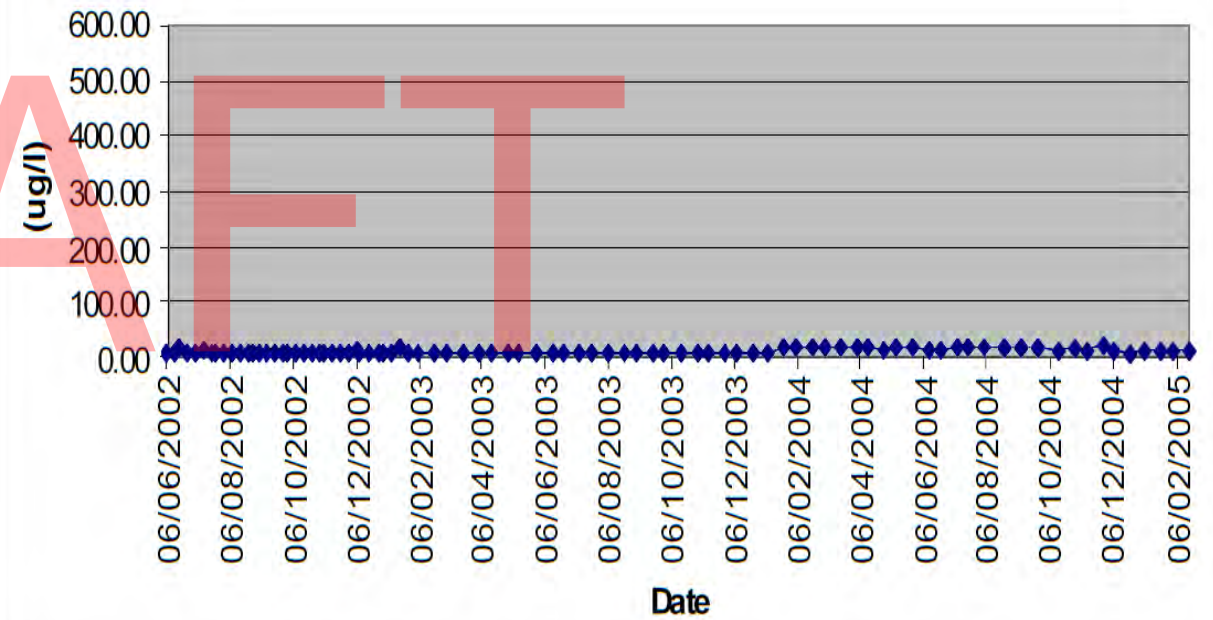


Iron Removal

Raw water - Iron

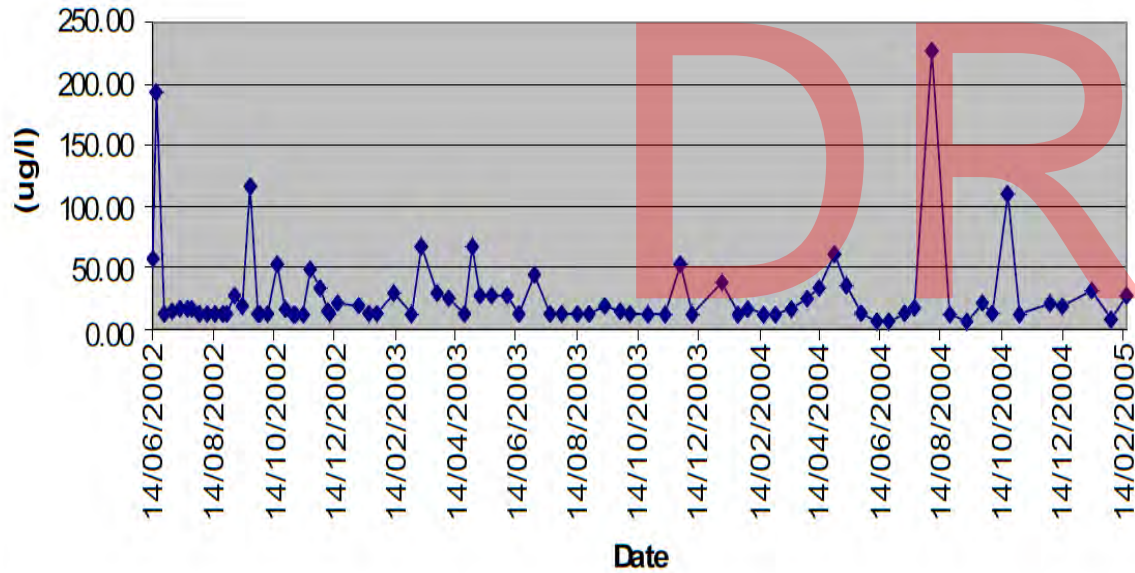


Final water - Iron

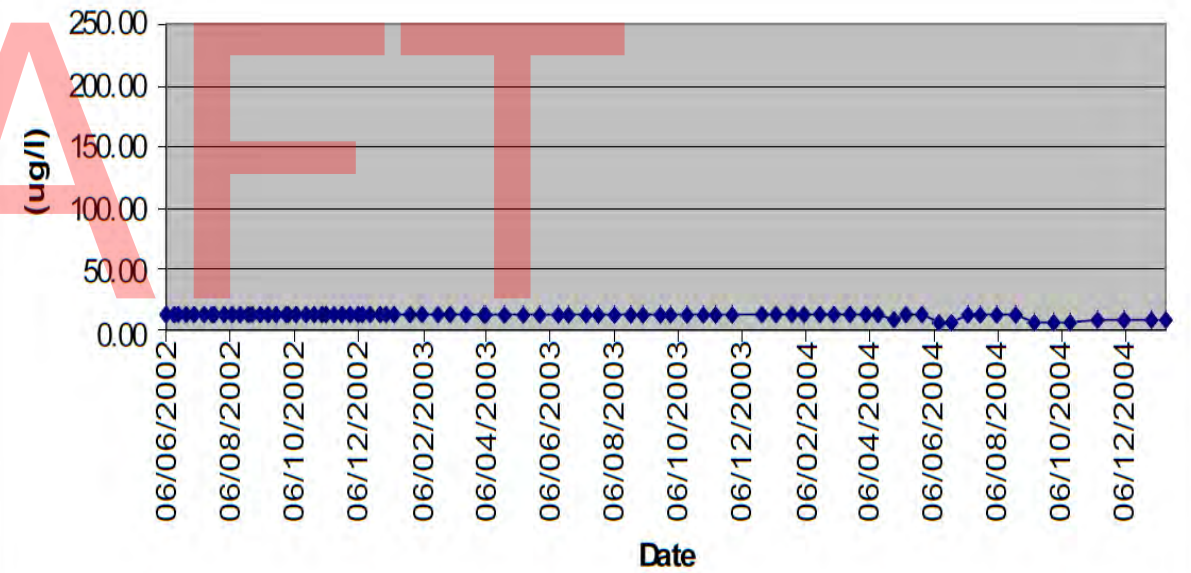


Aluminum Removal

Raw water Aluminium



Final water Aluminium



1. Manganese Removal

The Company

A large water company based in the south of England, providing water and sewerage services to a large population.

Challenge

A number of isolated properties in southern England had been having problems with high manganese levels in their potable water supply. The water often failed to meet drinking water standards.

Solution

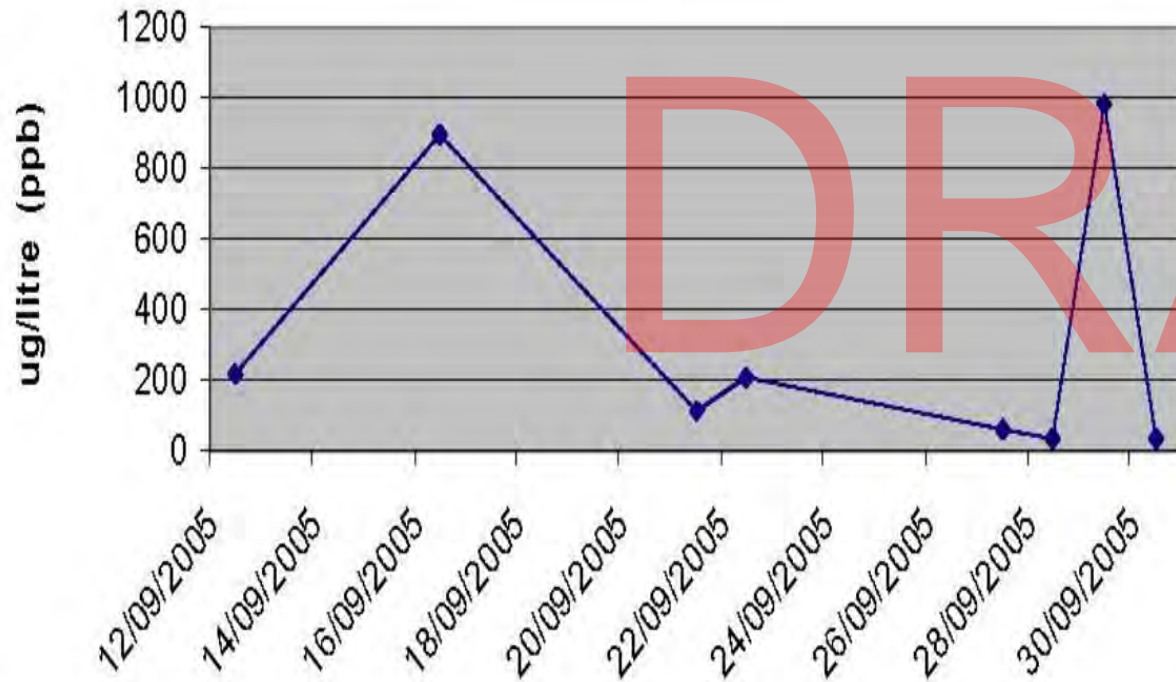
A small pilot plant was installed to determine the efficacy of **Brimac Bone Char** in removing manganese from raw reservoir water. **Brimac Bone Char** is manufactured specifically for the removal of colour, dissolved heavy metals and THM precursors for potable water applications. It is approved for drinking water purification throughout Europe.

Results and conclusion

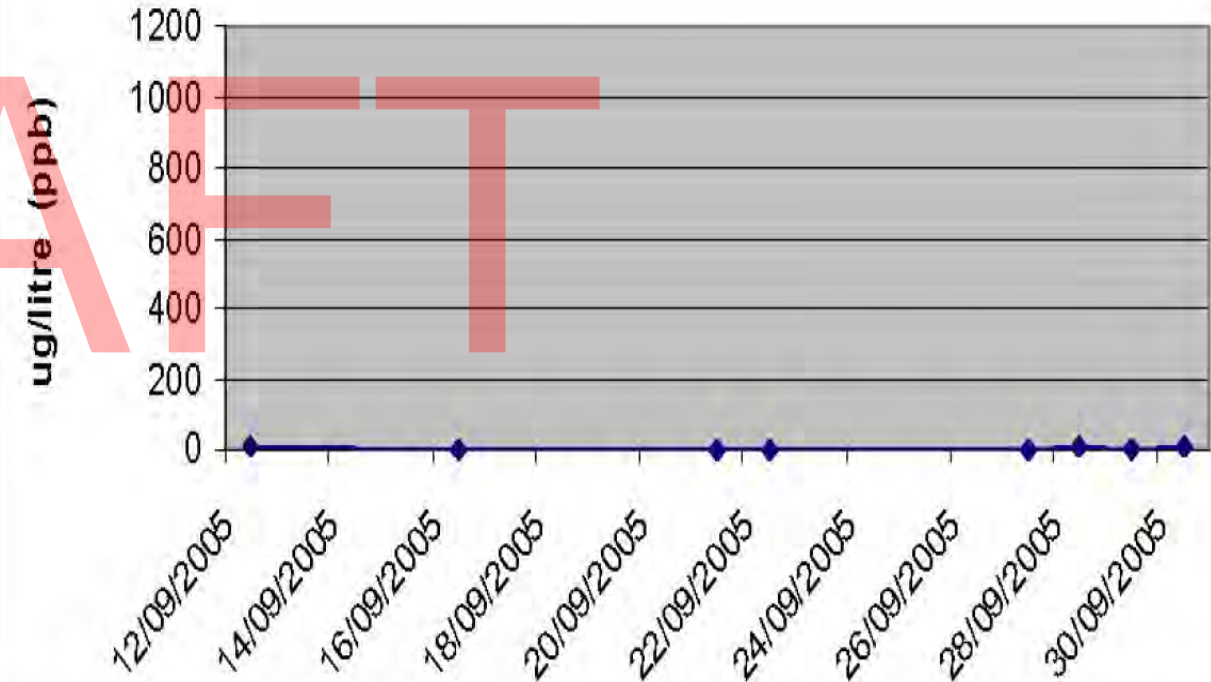
- Consistent manganese, colour and iron and removal was achieved even when raw water levels spiked.
- **Brimac Bone Char** is a reliable solution for removing colour, heavy metals or both - all in one granular material.
- As a result of the pilot study, six point of use treatment plant were ordered for installation during the first quarter of 2006.

Manganese Removal

Raw Water Manganese



Final Water Manganese



Fluride Removal

The ability of bone meal to sorb fluoride has been known since the early 1900's. The use of bone meal in a South Dakota water treatment plant from 1940-1971 to remove fluoride showed the potential bone charcoal should have for removal of fluoride. Bone meal imparts an unpleasant taste to water and has the potential for bacterial contamination (Mwaniki, 1990), and was the main reason for the plants closure. Bone charcoal however does not have the taste problems or significant bacteriological problems. Much of the limited research regarding bone charcoal as a water cleanup treatment has focused on its ability to remove fluoride. It is hoped that bone charcoal may be a cheap method to defluoridate drinking water in many developing countries and help prevent fluorosis (Mwaniki, 1992). Discussion in the literature regarding fluoride sorption by bone charcoal has considered the type of charcoal, amount of sorption possible, and the influence of pH, surface area and other possible contaminants in the water. Mwaniki (1992), and Larsen et al. (1994) found that bone charcoal became more crystalline when heated to high temperatures and was therefore better at sorbing fluoride when bone was heated to around 350-400°C instead of over 600°C.

The influence of calcium oxides and carbon content were considered influential also. Abdel-Fattah and Selim (1982) compared the surface areas of bone charcoals produced at different temperatures and concluded that if the bone was ground first material with a higher surface area was produced allowing greater sorption. The amount of fluoride sorbed by bone charcoal described in literature has varied. Some commentators have found only 2.5 mg g⁻¹ of fluoride sorbed onto bone charcoal (Mwaniki, 1990), while in 1992 Mwaniki noted that between 0.3 mg g⁻¹ and 11.3 mg g⁻¹ were sorbed depending on the type of bone charcoal used in the sorption. Most investigators found that a pH <7 provided greater sorption of the ion (Bhargava and Killedar, 1991, Mwaniki, 1992, Larsen and Pearce, 1993). Only Bhargava and Killedar, (1991) suggested pH 7 was the optimum pH for maximum fluoride sorption. He also found that the presence of Cl⁻, I⁻, K⁺ or Na⁺ had no effect on the sorption of F⁻. The main mechanism of sorption for fluoride attenuation by bone charcoal was proposed by Christoffersen et al. (1991). They suggested a dissolution / precipitation type reaction with any ion-exchange supplementary to this. Larsen and Pearce (1992) also concurred that dissolution/precipitation was the main mechanism.

Brimac Char Inc

May 2010
NSF 10/33/EPADWCTR
EPA/600/R-10/099

Environmental Technology Verification Report

Removal of Uranium in Drinking Water

Brimac Environmental Services, Inc.
Brimac HA 216 Adsorptive Media

Prepared by



NSF International

 Under a Cooperative Agreement with
U.S. Environmental Protection Agency

ETV ETV ETV

THE ENVIRONMENTAL TECHNOLOGY VERIFICATION PROGRAM



U.S. Environmental Protection Agency



NSF International

ETV Joint Verification Statement

TECHNOLOGY TYPE:	ADSORPTIVE MEDIA
APPLICATION:	REMOVAL OF URANIUM IN DRINKING WATER
PRODUCT NAME:	BRIMAC HA 216 ADSORPTIVE MEDIA
VENDOR:	BRIMAC ENVIRONMENTAL SERVICES, INC.
ADDRESS:	318 GRALAKE AVE. ANN ARBOR, MI 48103
PHONE:	734-998-0763
WEBSITE:	HTTP://WWW.BRIMACSERVICES.COM
EMAIL:	INFO@BRIMACSERVICES.COM

NSF International (NSF) manages the Drinking Water systems (DWS) Center under the U.S. Environmental Protection Agency's (EPA) Environmental Technology Verification (ETV) Program. The DWS Center recently evaluated the performance of the Brimac Environmental Services, Inc. (Brimac) HA 216 Adsorptive Media. The New Hampshire Department of Environmental Services (NHDES) monitored the operation of the pilot unit containing the media, collected water samples, and provided some laboratory services. NSF also analyzed samples and authored the verification report and this verification statement. The verification report contains a comprehensive description of the test.


EPA created the ETV Program to facilitate the deployment of innovative or improved environmental technologies through performance verification and dissemination of information. The ETV Program's goal is to further environmental protection by accelerating the acceptance and use of improved and more cost-effective technologies. ETV seeks to achieve this goal by providing high quality, peer-reviewed data on technology performance to those involved in the design, distribution, permitting, purchase, and use of environmental technologies.

ETV works in partnership with recognized standards and testing organizations, stakeholder groups (consisting of buyers, vendor organizations, and permittees), and with the full participation of individual technology developers. The program evaluates the performance of innovative technologies by developing test plans that are responsive to the needs of stakeholders, conducting field or laboratory tests (as appropriate), collecting and analyzing data, and preparing peer-reviewed reports. All evaluations are conducted in accordance with rigorous quality assurance protocols to ensure that data of known and adequate quality are generated and that the results are defensible.

Certifications

Certificado Kosher

**KASHRUT
MAGUÉN DAVID**



ועד הכשרות
ק"ק מגן דוד יב"ץ

Los siguientes productos elaborados por: **HA2 Natural de México, S de R.L. de C.V**

Fecha de emisión: **10 de Octubre del 2019**

Ubicado en: -, -, Mexico

Están certificados Kosher con las restricciones señaladas en la siguiente lista:

Código: 837

Marca	Clave	Nombre	Código Kosher	Status	Restricciones	Observaciones
		Carbon de Hueso de Bovino	837-38259	Parve		

Este certificado es válido hasta el: 09 de Octubre del 2020


 Rabino David Abourmad

Horacio 1008, 2do piso, Col. Polanco, C.P. 11560 México D.F. Tel. +52 (55) 3872-5050 Fax. (55) 3872-0177 Email: kmd@kosher.com.mx www.kosher.com.mx

Alterar este certificado o la colocación del símbolo KMD sobre los productos no mencionados anteriormente constituye un uso no autorizado del símbolo de KMD, que es una marca registrada internacionalmente.

Certifications



Certifications



INTO SERVICE INFORMATION (ISI)

PRODUCT

BC20000 Series adsorption media

Company Identification:

Brimac Char Inc
3202 North Closner Boulevard
Edinburg 78541
Texas USA

Emergency Telephone Number:

+1 956 231 0420

Installation of BC Adsorption Media

The following guidelines should be followed in order to install BC Adsorption media in a vessel for use in water treatment.

These guidelines are independent of vessel design, and issues such as vessel dimensions and internal structures are not considered in this guide.

All work must be carried out with regards to safe working conditions.

Please refer to the Material Safety Data Sheet (MSDS) supplied for further information.

Installation

Fill the vessel approximately half full with water. Using appropriate safety equipment, slowly empty the bag(s) of media into the vessel, trying to ensure even distribution of the media within the vessel. Dust may be generated during this operation and respiratory/eye protection may be required. Ensure the top of the bed does not break through the surface of the water in the vessel. Add more water where this may occur. Once all the bags of media have been added to the vessel, ensure the top of the bed is even and level.

Make all relevant connections to the vessel, and where using pressurised vessels, ensure all air is excluded from the vessel before sealing. Wash the bed with water to fully settle the bed and remove any fines. This may take up to 20 bed volumes. Once there is no evidence of fines within the wash water, the vessel containing the media may be placed online.

pH level

When water is first passed through the new media, the pH of the water will be raised. The pH can rise as high as pH11. To remove any pH elevation, continue to pass water through the new media vessel until the pH is acceptable for your use. During the washing period the used water should be sent to the drain, whilst observing local regulations for discharge.

When pre-washed grade material (BC 20000W Series) is being used it has been pre-washed at the factory to remove the pH elevation. Washing of the media will still be required to settle the media bed and remove any fines generated in transport and loading.

A minimum of 20 bed volumes of water should be used for washing the media.

Products covered by this document:

BC 20000 Series, BC 20000W Series

The information and recommendations in this publication are, to the best of our knowledge, information and belief, accurate at the date of publication. Nothing herein is to be construed as warranty, expressed or implied. In all cases, it is the responsibility of the user to determine the applicability of such information or the suitability of any products for their own particular purpose.



MATERIAL SAFETY DATA SHEET (MSDS)

MSDS BC20000 ISSUE September 2018

1. PRODUCT

BC20000 Series adsorption media

Company Identification:

Brimac Char Inc
3202 North Closner Boulevard
Edinburg 78541
Texas USA

Emergency Telephone Number:

+1 956 231 0420

2. CHEMICAL COMPOSITION

Carbonaceous adsorbent composed of carbon (8.5 TO 11%) and hydroxyapatite (a basic calcium phosphate)

CAS Number:

8021-99-6

Customs Tariff Number:

3802.9000

3. HAZARDS IDENTIFICATION

Health Effects:

10 mg/m³ TWA, 8-hr (there is no OES for BC 20000;
The given value is applicable as a nuisance dust limit).

4. FIRST AID MEASURES

Skin contact:

Wash off with soap and plenty of water, removing all contaminated clothes and shoes.

Eye Contact:

Irrigate the eye with water for 15 minutes. If there is any persistent irritation obtain medical attention immediately. Inhalation of BC 20000 can cause irritation to the respiratory system. Remove affected person to fresh air. If recovery is delayed, seek medical advice.

Inhalation:

Ingestion:

Ingestion BC 20000 may irritate the digestive tracts. As no harmful effects are anticipated, vomiting should not be induced.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Carbon dioxide, foam, fog/water spray, dry powder.

Protective Equipment: Chemical protection suit, gloves and boots, self contained breathing apparatus.

Special Hazards: Non flammable in bulk. Will smoulder if ignited. Risk of carbon monoxide formation where air circulation is restricted

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective clothing. (See 8).
Environmental precautions: Dispose of within local or national regulations.
Methods for Cleaning up: Sweep or shovel into suitable container for disposal.

7. HANDLING AND STORAGE

Handling precautions: Maintain good working practices while handling.
Remove contaminated clothing and wash before reuse
Storage condition: Minimise dust formation. Keep dry. Keep away from strong oxidising agents and strong acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures: BC 20000 may contain trace quantities of ammonia which can be released during initial washing. Ensure adequate ventilation In confined areas a respirator suitable for ammonia should be worn.
Skin Protection: Suitable gloves. Lightweight protective clothing.
Eye Protection: Tightly fitting safety goggles.
Respiratory Protection: Wear suitable dust mask.
Additional: Before eating, drinking or smoking, wash hands and face thoroughly with soap and water.

9. PHYSICAL AND CHEMICAL PROPERTIES

Colour: Black.
Material State: Granular or powdered solid.
Odour: Non specific.
pH: 8.5-12
Boiling point (°C): Not applicable
Melting point (°C): Not applicable
Flash point (°C): Not applicable
Flammability: Not determined
Auto ignition temperature: Not determined
Explosive properties: Class B - non-explosive
Oxidising properties: Not applicable.
Vapour Pressure: Not applicable.
Bulk density (kg/m³): 560-720
Solubility (water): Insoluble.

10. STABILITY AND REACTIVITY

Stability: Stable at ambient temperatures
Conditions to avoid: Keep away from heat and sources of ignition
Materials to avoid Reactive chemicals, especially oxidising agents

Hazardous decomposition products: Thermal decomposition can lead to the release of carbon dioxide, and a little hydrogen sulphide may be given off on reaction with mineral acids.

11. TOXICOLOGICAL INFORMATION

None

12. ECOLOGICAL INFORMATION

None

13. DISPOSAL CONSIDERATIONS

All local and national regulations should be followed.

14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

Marking and Labelling.

Symbol: None.
Risk Phrases: R36 - Irritating to eyes
R37 - Irritating to respiratory system
R38 - Irritating to skin
Safety Phrases: S36, S37/S39

16. OTHER INFORMATION

None

Products covered by this document:
BC 20000 Series, BC 20000W Series

The information and recommendations in this publication are, to the best of our knowledge, information and belief, accurate at the date of publication. Nothing herein is to be construed as warranty, expressed or implied. In all cases, it is the responsibility of the user to determine the applicability of such information or the suitability of any products for their own particular purpose.



**NSF/ANSI 44-61 CERTIFIED FOR
MATERIAL SAFETY**

RESINTECH CGS is a sodium form standard crosslinked gel strong acid cation resin. **CGS** is optimized for residential applications that require good regeneration efficiency and high capacity. **RESINTECH CGS** is intended for use in all residential and commercial softening applications that do not have significant amounts of chlorine in the feedwater. **CGS** is supplied in the sodium form.

FEATURES & BENEFITS

- **RESIDENTIAL SOFTENING APPLICATIONS**

Resin parameters are optimized for residential softeners

- **LOW COLOR THROW**

- **SUPERIOR PHYSICAL STABILITY**

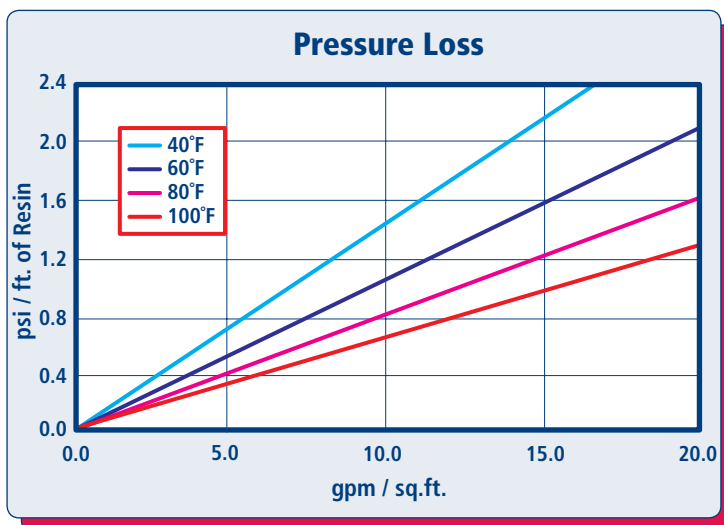
93% plus sphericity and high crush strengths together with carefully controlled particle distribution provides long life and low pressure drop

- **COMPLIES WITH US FDA REGULATIONS**

Conforms to paragraph 21CFR173.25 of the Food Additives Regulations of the US FDA

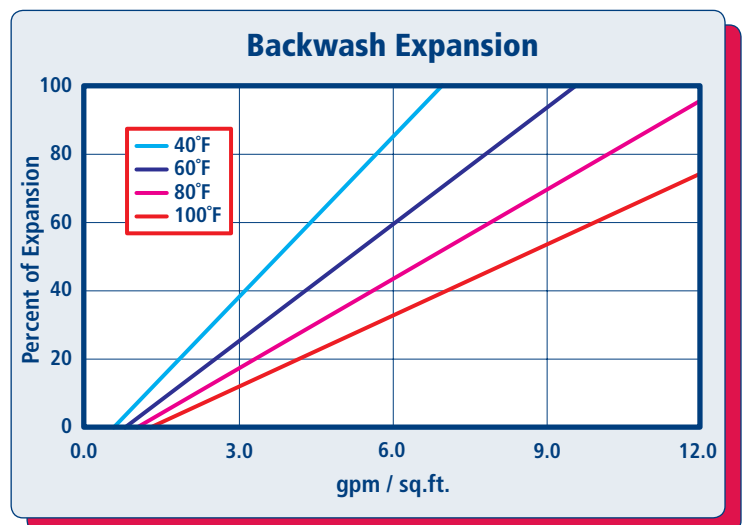
Prior to first use for potable water, resin should be backwashed for a minimum of 20 minutes, followed by 10 bed volumes of downflow rinse.

HYDRAULIC PROPERTIES



PRESSURE LOSS

The graph above shows the expected pressure loss of *ResinTech CGS* per foot of bed depth as a function of flow rate at various temperatures.



BACKWASH

The graph above shows the expansion characteristics of *ResinTech CGS* as a function of flow rate at various temperatures.

PHYSICAL PROPERTIES

Polymer Structure	Styrene/DVB
Polymer Type	Gel
Functional Group	Sulfonic Acid
Physical Form	Spherical beads
Ionic Form as shipped	Sodium
Total Capacity	
Sodium form	>1.8 meq/mL
Water Retention	
Sodium form	40 to 52 percent
Approximate Shipping Weight	
Sodium form	50 lbs./cu.ft.
Screen Size Distribution (U.S. mesh)	16 to 50
Maximum Fines Content (<50 mesh)	1 percent
Minimum Sphericity	90 percent
Uniformity Coefficient	1.6 approx.
Resin Color	Amber

Note: Physical properties can be certified on a per lot basis, available upon request

SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature	
Sodium form	250°F
Minimum bed depth	24 inches
Backwash expansion	25 to 50 percent
Maximum pressure loss	25 psi
Operating pH range	0 to 14 SU
Regenerant Concentration	
Salt cycle	10 to 15 percent NaCl
Regenerant level	4 to 15 lbs./cu.ft.
Regenerant flow rate.	0.5 to 1.5 gpm/cu.ft.
Regenerant contact time	>20 minutes
Displacement flow rate	Same as dilution water
Displacement volume	10 to 15 gallons/cu.ft.
Rinse flow rate	Same as service flow
Rinse volume	35 to 60 gallons/cu.ft.
Service flow rate	1 to 10 gpm/cu.ft.

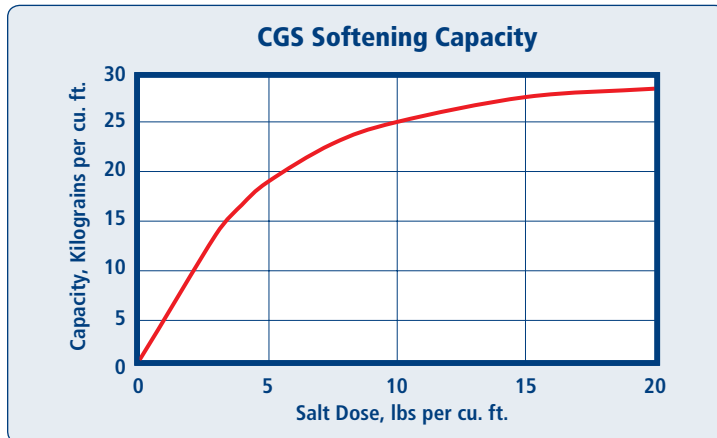
Note: These guidelines describe average low risk operating conditions. They are not intended to be absolute minimums or maximums.

For operation outside these guidelines, contact ResinTech Technical Support

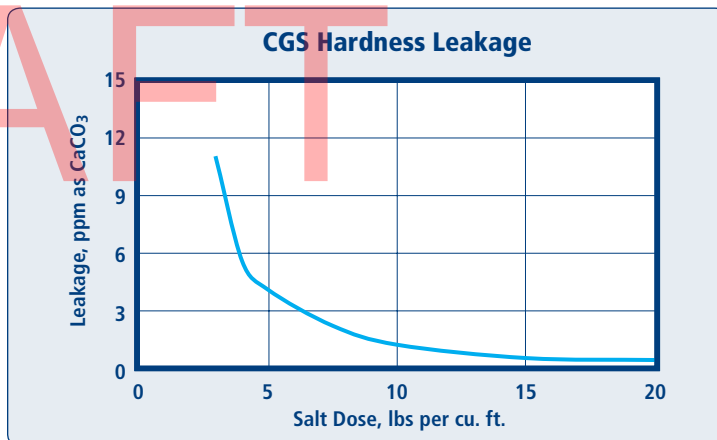
APPLICATIONS

SOFTENING

RESINTECH CGS is a standard crosslinked cation resin optimized for residential and commercial applications. This type of resin is easier to regenerate than the higher crosslinked resins. CGS has marginal resistance to chlorine and other oxidants and is not ideal for high temperature and other high stress applications.



Capacity and leakage data are based on the following: 2:1 Ca:Mg ratio, 500 ppm TDS as CaCO₃, 0.2% hardness in the salt and 10% brine concentration applied co-currently through the resin over 30 minutes. No engineering downgrade has been applied.



East Coast - West Berlin, NJ p:856.768.9600 • Midwest - Chicago, IL p:708.777.1167 • West Coast - Los Angeles, CA p:323.262.1600

CAUTION: DO NOT MIX ION EXCHANGE RESIN WITH STRONG OXIDIZING AGENTS. Nitric acid and other strong oxidizing agents can cause explosive reactions when mixed with organic materials, such as ion exchange resins.

MATERIAL SAFETY DATA SHEETS (MSDS) are available for all ResinTech Inc. products. To obtain a copy, contact your local ResinTech sales representative or our corporate headquarters. They contain important health and safety information. That information may be needed to protect your employees and customers from any known health and safety hazards associated with our products. We recommend that you secure and study the pertinent MSDS for our products and any other products being used. These suggestions and data are based on information we believe to be reliable. They are offered in good faith. However we do not make any guarantee or warranty. We caution against using these products in an unsafe manner or in violation of any patents; further we assume no liability for the consequences of any such actions.

RESINTECH is a registered trademark © of RESINTECH INC.

CGS rev 1.1

ZENNER PERFORMANCE

Cast Iron Turbine Meters

Sizes 2" through 12"

INTRODUCTION: ZENNER PERFORMANCE Turbine Meters are designed for applications where flows are usually moderate to high and occasionally low. They are used in measurement of potable cold water in commercial and industrial services where flows are in one direction.

OPERATION: Water flows through the turbine section which causes the rotor to turn proportionately to the quantity of water flowing through the meter. A drive magnet transmits the motion of the rotor to a driven magnet located within the hermetically sealed register. The magnet is connected to a gear train which translates the rotations into volume totalization displayed on the register dial face. The only moving parts in the meter are the rotor assembly and vertical shaft .

CONSTRUCTION: ZENNER PERFORMANCE Turbine Meters consist of three basic components: Cast Iron Epoxy Coated main case, measuring element, and sealed register. The measuring element assembly includes the rotor assembly, vertical shaft and a calibration vane which eliminates the need for calibration change gears.

MAINTENANCE: ZENNER PERFORMANCE Turbine Meters are engineered and manufactured to provide long-term service and operate virtually maintenance free. If necessary the universal measuring element (UME) can be removed from the main case for maintenance. Interchangeability of certain parts between like sized meters minimizes spare parts inventory.

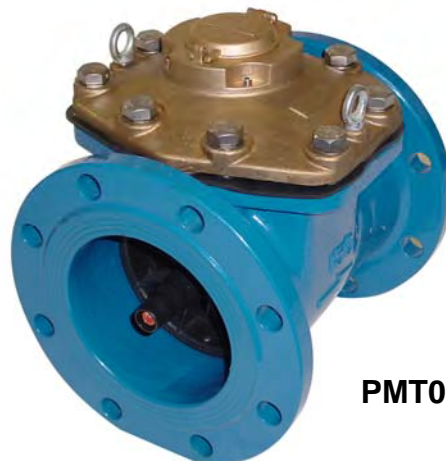
CONFORMANCE: ZENNER PERFORMANCE Turbine Meters are tested and comply with AWWA C701 Class II performance standards.

STRAINERS: ZENNER PERFORMANCE recommends the use of a separate strainer upstream from the turbine meter. Strainers reduce the chance of damage to the rotor as well as the frequency in which it must be removed for inspection. The lack of a strainer may void the warranty of the turbine meter.

CONNECTIONS: Companion flanges for installation of meters on various pipe types and sizes are available in bronze or cast iron.



PMT04



PMT06

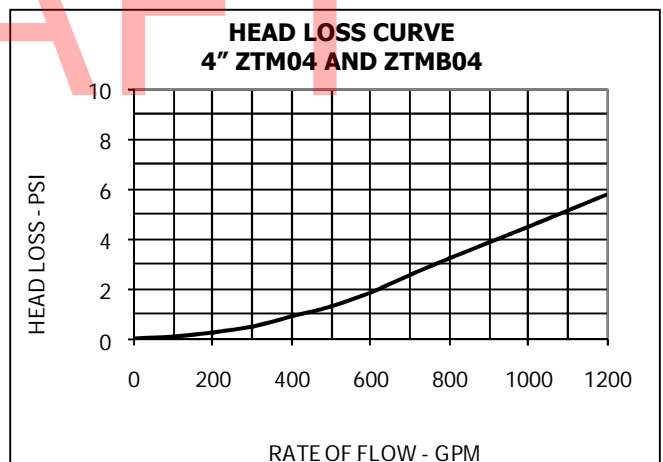
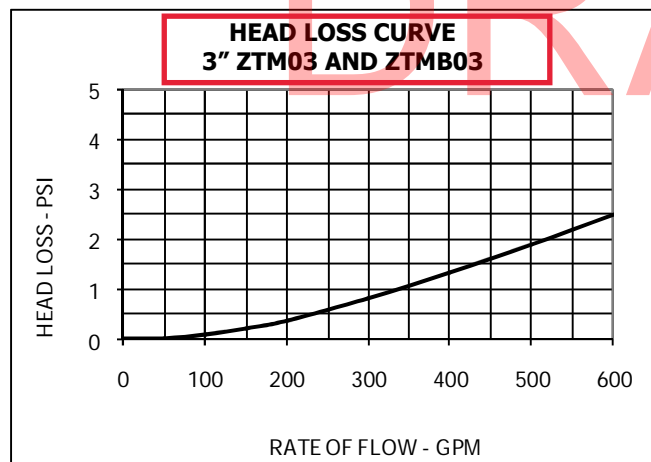
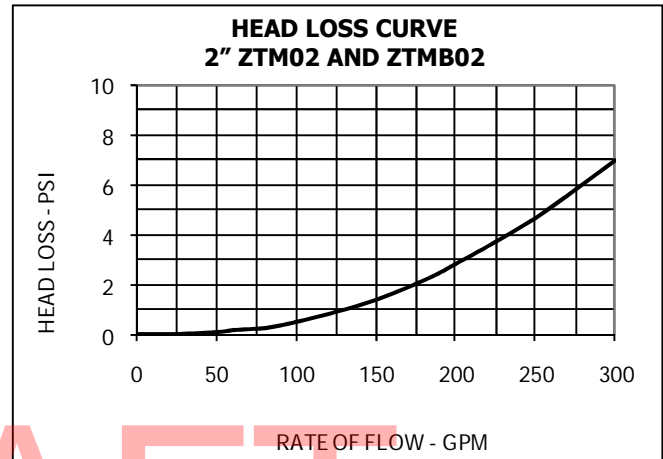
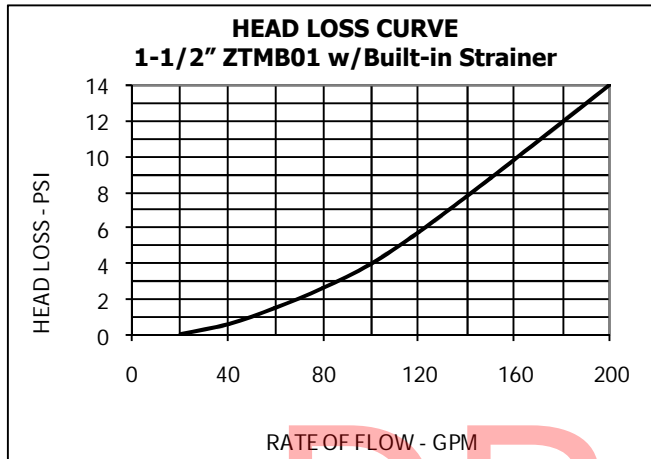
ZENNER PERFORMANCE

15280 Addison Rd #340, Addison, TX 75001, (972) 386-6611, Fax (972) 386-1814
www.zennerusa.com

MODEL		PMT02	PMT03	PMT04	PMT06	PMT08	PMT10	PMT12
SIZE		2"	3"	4"	6"	8"	10"	12"
Flow rate maximum intermittent	USGPM	400	550	1250	2500	4500	7000	8800
Maximum continuous	USGPM	200	450	1000	2000	3500	5500	6200
Optimum operating flow range	USGPM	3 - 200	5 - 550	10 - 1250	20 - 2500	30 - 4500	50 - 7000	90 - 8800
Low flow rate	USGPM	2	2-1/2	5	12	20	45	65
Start-up flow rate	USGPM	7/8	1-1/8	1-3/8	7-1/2	8	15	15
Maximum Working Pressure	P.S.I.	160	160	160	160	160	160	160
Maximum Temperature	Deg. F	140	140	140	140	140	140	140
Length	Inches	7-7/8	8-7/8	9-7/8	11-7/8	13-3/4	17-3/4	19-5/8
Height	Inches	9-1/2	10-1/4	11	12-7/8	14-1/4	19	20-1/4
Width	Inches	7	7-1/2	9	11	13-1/2	16	19
Weight	Pounds	24	32	38	84	126	225	255
Number of holes per flange		4	4	8	8	8	12	12

DRAFT

ZENNER ZTM and ZTMB Turbine Water Meters (Without Strainer) Typical Head Loss Curves

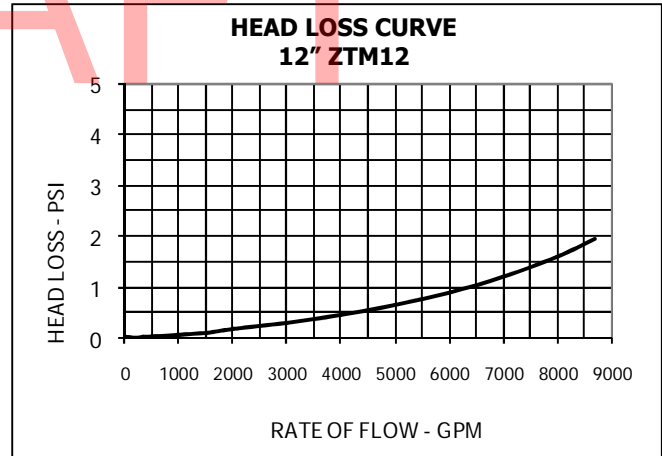
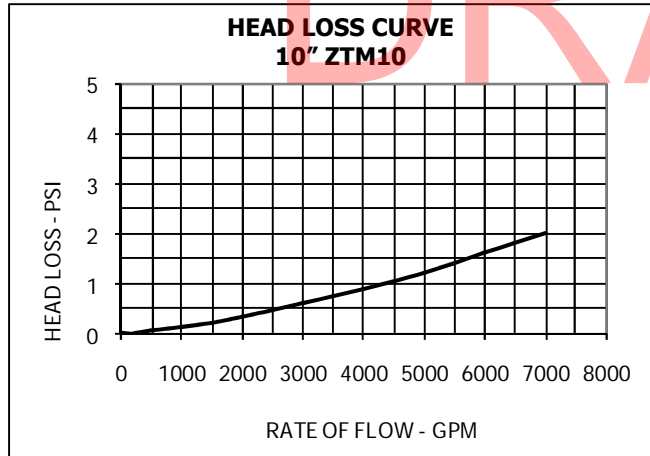
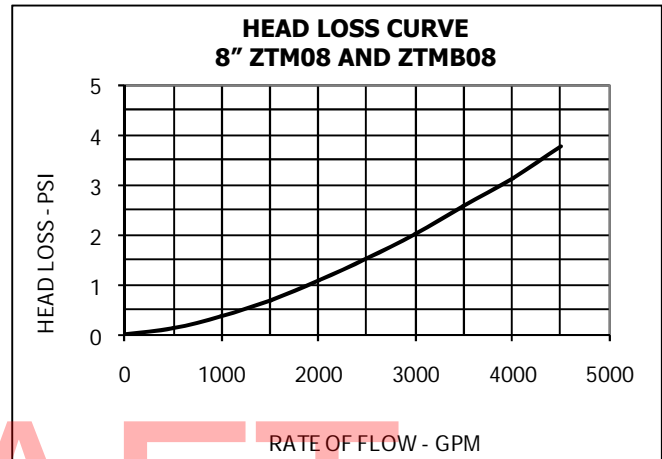
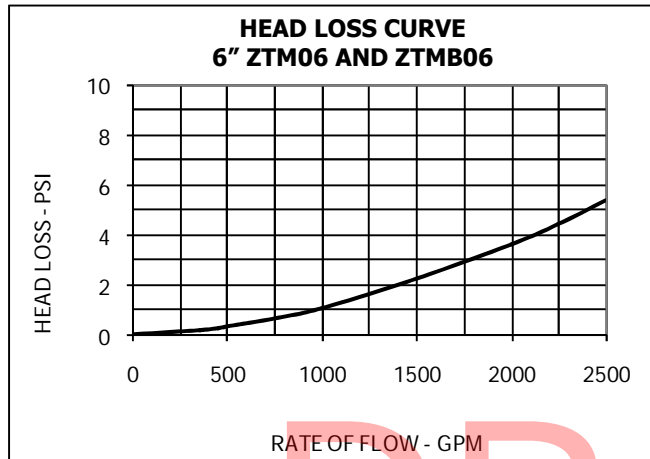


ZENNER USA

15280 Addison Rd #340, Addison, TX 75001, (972) 386-6611, Fax (972) 386-1814

www.zennerusa.com

ZENNER ZTM and ZTMB Turbine Water Meters (Without Strainer) Typical Head Loss Curves



ZENNER USA

15280 Addison Rd #340, Addison, TX 75001, (972) 386-6611, Fax (972) 386-1814

www.zennerusa.com

Appendix K

MassDEP Antidegradation Review and Determination

Lockwood Remediation
Technologies LLC



From: [Ruan, Xiaodan \(DEP\)](#)
To: [Brian Caccavale](#)
Cc: [Coniaris, Catherine \(DEP\)](#)
Subject: RE: [External] NPDES DRGP Discharge Inquiry - 93 Bennington Street, Revere, MA - Belle Isle Inlet Outfall
Date: Wednesday, December 28, 2022 3:13:45 PM
Attachments: [image001.jpg](#)

Hi Brian,

We can schedule a meeting sometime in the week of 1/9 or 1/16 to go over with you the antidegradation review process and also for us to learn about the proposed project.

But to get you started, the following information will be needed in addition to the NOI for us to conduct an antidegradation review (you already have answers to some of the questions):

Please respond to the following items to describe how the project would demonstrate compliance with the MA WQS requirements for authorization listed in 314 CMR 4.04(5)(a)(2) through 4.04(5)(a)(4):

1. Describe how the discharge is for the express purpose and intent of maintaining or enhancing the resource for its designated use.
2. Are there less environmentally damaging alternative sites for the discharge, sources for disposal, or methods to eliminate the discharge that are reasonably available or feasible? Examples of what this demonstration may include are: an analysis of the reuse and conservation of discharge water, land application of discharge water or use of closed systems, improved process controls, improved discharge water treatment facility operation, discharge to sewer for treatment at wastewater treatment plant, alternative methods of treatment and treatment beyond applicable technology requirements of the Federal Clean Water Act. Technologically feasible alternatives must be compared with the potential environmental degradation.
3. To the maximum extent feasible, are the discharge and activity designed and conducted to minimize adverse impacts on water quality, including implementation of source reduction practices? All reasonable efforts to minimize the environmental impacts of the proposed discharge must be made.
4. Will the discharge impair existing uses of the receiving water or result in a level of water quality less than that specified for the Class?

The antidegradation review process includes:

- Reviewing the application and responses to the above questions
- Drafting a tentative determination and public noticing it in the Environmental Monitor for 30 days (note the EM has a set publication schedule)
- Responding to the comments if comments are received during the comment period
- Issuing the final determination if approved.

This process should take up to four months from the time the application to MassDEP is completed.

For MassDEP's application, EPA's eNOI is required as we need to review the information in the eNOI.

Please submit the pdf of the eNOI (with the complete application except for the antidegradation approval). You also need to submit a \$500 fee (unless fee exempt, e.g., municipality). For MassDEP's application, please use ePLACE, an online application submittal process where you will set up a user ID and be able to submit NOIs for various projects as well as pay by credit card. The instructions are located on this page: <https://www.mass.gov/how-to/wm-15-npdes-general-permit-notice-of-intent>. Technical assistant information is available on the front page of the ePLACE application webpage.

Please let me know if you have any questions.

Thanks,
Xiaodan

Xiaodan Ruan
Environmental Engineer
Massachusetts Department of Environmental Protection
One Winter Street, Boston, MA 02108
(857)-256-4172
xiaodan.ruan@mass.gov

From: Brian Caccavale <bcaccavale@lrt-llc.net>
Sent: Tuesday, December 27, 2022 12:10 PM
To: Coniaris, Catherine (DEP) <Catherine.Coniaris@mass.gov>
Cc: Ruan, Xiaodan (DEP) <xiaodan.ruan@mass.gov>
Subject: RE: NPDES DRGP Discharge Inquiry - 93 Bennington Street, Revere, MA - Belle Isle Inlet Outfall

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Hi Catherine,

I hope you had a great holiday.

I am following up on my email below. Please let me know what information would be required to request an authorization discharge from the MassDEP under 314 CMR 4.04(5) and the anticipated timeframe for an authorization to be issued (if approved).

Thank you in advance for your help. I greatly appreciate it.

-Brian

From: Brian Caccavale
Sent: Tuesday, December 20, 2022 6:05 PM

To: catherine.coniaris@state.ma.us

Cc: Ruan, Xiaodan (DEP) <xiaodan.ruan@state.ma.us>

Subject: NPDES DRGP Discharge Inquiry - 93 Bennington Street, Revere, MA - Belle Isle Inlet Outfall

Good afternoon Catherine,

LRT has been asked to prepare a NPDES DRGP Notice of Intent (NOI) for construction dewatering activities to be performed for a project located at 93 Bennington Street in Revere, MA. As part of the NOI process, LRT has evaluated the proposed discharge route and determined that the discharge location for the nearest catch basin along Bennington Street is an outfall at the Belle Isle Inlet (see attached screenshot). Per 310 CMR 4.00, the Belle Isle Inlet is classified as an Outstanding Resource Water (ORW) and is protected under 314 CMR 4.04(3).

LRT has evaluated alternative discharge mechanisms for the project dewatering. The City of Revere has informed LRT that discharge to the sanitary sewer system is not feasible and that our only option would be a NPDES permit (see attached email). Off-site disposal of water via pumping into vac trucks and hauling off-site is not considered economically feasible or practical due to the anticipated volume of water to be encountered during the dewatering activities. Additionally, on-site recharge is not considered feasible or practical due to the small size of the site.

I am hoping that you can confirm if the construction dewatering activities would be an eligible discharge activity for consideration of a discharge authorization from the MassDEP under 314 CMR 4.00. If so, I am hoping that you provide some information as to the process that would be required to request an authorization to discharge from the MassDEP under 314 CMR 4.04(5) and the anticipated timeframe for an authorization to be issued (if approved).

Thanks Catherine. I appreciate your consideration to this request.

-Brian

Brian Caccavale
Project Manager

Lockwood Remediation Technologies, LLC

89 Crawford Street
Leominster, MA 01453
O: 774-450-7177
C: 978-751-1265
bcaccavale@lrt-llc.net

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89 Crawford Street
Leominster, Massachusetts 01453
Tel: 774.450.7177
www.lrt-llc.net

January 11, 2023

Ms. Catherine Coniaris
Massachusetts Department of Environmental Protection
100 Cambridge Street
Boston, MA 02108

Reference: Authorization Request to Discharge to an Outstanding Resource Water
Temporary Construction Dewatering for Site Redevelopment
93 Bennington Street
Revere, Massachusetts 02151

Dear Catherine:

On behalf of Sora Revere, LLC, Lockwood Remediation Technologies, LLC (LRT) is submitting this Authorization Request to Discharge to an Outstanding Resource Water. This request is being submitted as part of a Notice of Intent (NOI) submittal that is being prepared to request coverage under the newly promulgated National Pollutant Discharge Elimination System (NPDES) Dewatering and Remediation General Permit (DRGP) MAG910000 for site redevelopment activities to be performed at the 93 Bennington Street property in Revere, Massachusetts (the Site).

As part of the NOI preparation, LRT evaluated the proposed discharge route and determined that the discharge location (catch basin along Bennington Street) ultimately discharges to the Belle Isle Inlet. Information for the receiving water was collected from the Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 Reporting Cycle. Based on a review of this information, LRT identified that the Belle Isle Inlet is part of the Belle Isle Marsh and is identified as an Area of Critical Environmental Concern (ACEC). Additionally, the Belle Isle Inlet and its tributaries are classified as an "SA" surface water body and are considered an "Outstanding Resource Water" or ORW under the Massachusetts Surface Water Quality Standards (314 CMR 4.00). The Belle Isle Inlet is designated for shellfishing and is listed as impaired for fecal coliform, polychlorinated biphenyls (PCBs) in fish tissue and other contaminants in fish and/or shellfish.

As outlined in Section 1.3 of the DRGP, discharges to an ORW in Massachusetts are ineligible for coverage under the DRGP, unless an authorization is granted by the Massachusetts Department of Environmental Protection (MassDEP) by 314 CMR 4.04(3)(b). On this basis, LRT contacted the MassDEP via email on December 20, 2022 to inquire about an authorization to discharge to the Belle Isle Inlet under the DRGP. At the request of the MassDEP, LRT has prepared the following information pursuant to 314 CMR 4.04(5)(a) to facilitate an antidegradation review and determination by MassDEP to issue an authorization to discharge to the Belle Isle Inlet.

1. Describe how the discharge is for the express purpose and intent of maintaining or enhancing the resource for its designated use.

The proposed dewatering activities will enable the site to be redeveloped in accordance with the development plan for the 93 Bennington Street property in Revere, MA. The conditions within the Belle Isle Inlet will remain consistent with the existing conditions of the Belle Isle Inlet throughout the discharge, as the dewatered groundwater will be treated prior to discharge to meet the applicable NPDES DRGP Effluent Limitations. On this basis, it is LRT's opinion that the proposed discharge will maintain the resource for its designated use.

2. Are there less environmentally damaging alternative sites for the discharge, sources for disposal, or methods to eliminate the discharge that are reasonably available or feasible? Examples of what this demonstration may include are: an analysis of the reuse and conservation of discharge water, land application of discharge water or use of closed systems, improved process controls, improved discharge water treatment facility operation, discharge to sewer for treatment at wastewater treatment plant, alternative methods of treatment and treatment beyond applicable technology requirements of the Federal Clean Water Act. Technologically feasible alternatives must be compared with the potential environmental degradation.

Based on the site redevelopment plans and shallow groundwater at the site, dewatering must be conducted to enable the subsurface construction and installation of the foundation/underground parking and utilities associated with the proposed building. A feasibility evaluation has been performed and LRT has concluded the following:

- Discharge into a sewer system for treatment at a wastewater treatment plant is not available;
- On-site recharge is not reasonably feasible, due to the space constraints at the site (the proposed building will occupy the majority of the parcel) and the nature of the subsurface materials at the site; and
- Off-site transport of dewatered groundwater is not reasonably feasible, due to the excessive transportation and disposal costs.

On this basis, the proposed discharge has been determined to be the most practical approach for management of the water from the dewatering operations to be conducted at the site during the site redevelopment activities.

3. To the maximum extent feasible, are the discharge and activity designed and conducted to minimize adverse impacts on water quality, including implementation of source reduction practices? All reasonable efforts to minimize the environmental impacts of the proposed discharge must be made.

To minimize potential adverse impacts to the water quality of the Belle Isle Inlet, dewatered groundwater will be treated on-site prior to discharge to the storm sewer system. The treatment

system will be modified (as necessary) based on the results of the regular monitoring and compliance sampling to ensure compliance with the NPDES DRGP Effluent Limitations.

4. Will the discharge impair existing uses of the receiving water or result in a level of water quality less than that specified for the Class?

The proposed discharge will be treated to avoid any adverse impacts to the water quality of the Belle Isle Inlet.

Please feel free to contact us at 774-450-7177 if you have any questions or if you require additional information.

Sincerely,
Lockwood Remediation Technologies, LLC

Brian Caccavale

Brian Caccavale
Project Manager

Paul Lockwood

Paul Lockwood
President

DRAFT

Appendix L
Additional Information

Lockwood Remediation
Technologies LLC



E-Signature Agreement

A. Valid Electronic Signature

Valid electronic signature refers to an electronic signature on an electronic document that has been created with an electronic signature device. The identified signatory is uniquely entitled to use the signature device for signing that document provided that this device has not been compromised, and where the signatory is an individual who is authorized to sign the document by virtue of his or her legal status or his or her relationship to the entity on whose behalf the signature is executed.

B. Electronic Signature Device

Electronic signature device refers to a code or other mechanism that is used to create electronic signatures. Where the device is used to create an individual's electronic signature, then the code or mechanism must be unique to that individual at the time the signature is created and he or she must be uniquely entitled to use it. The device is compromised if the code or mechanism is available for use by any other person. EPA's DRGP forms provided under a temporary, partial or complete waiver utilize the Agency's Adobe electronic signature device. If validated, the forms will indicate all signatures are valid, and the forms will be locked from further changes.

C. Signature Requirement

1. By providing a signed e-signature agreement, the signatory is confirming they have reviewed and their e-signature meets the following requirements:
 - E-signatures must be valid at the time of signing.
 - E-documents cannot be altered without detection after signing.
 - Each signatory must have an opportunity to:
 - Review the e-document content, in human-readable format, before signing; and
 - Review the required certification statement, which includes criminal penalty implications of false certification, at the time of signing.
 - Signatories must sign either an electronic signature agreement or subscriber agreement for the e-signature device used to create his or her e-signature.
 - The system must automatically respond to the receipt of an e-document with an acknowledgement identifying the e-document received, the signatory, and the date and time of receipt. It must also be sent to at least one address that does not share the same access controls as the account used to make the electronic submission.
 - For each e-signature device, the identity of its unique user and the users' relationship to the entity for which he or she is signing has been determined by the state, tribe, or local government.
2. By providing form signatures in electronic format, the signatory:
 - Agrees to protect their signature device, such as a password or hardware token, from compromise;
 - Agrees to report any evidence of compromise; and
 - Understands that the signature they submit electronically with the device carries the same legal force and obligation as a hand written signature.

Note: This requirement must be met at the time of e-signature certification.

**U.S. Environmental Protection Agency
Office of Enforcement and Compliance Assurance
NPDES e-Reporting Tool Electronic Signature Agreement**

In accepting the electronic signature credential issued by the U.S. Environmental Protection Agency (EPA) to sign electronic documents submitted to EPA, and as a representative for:

Electronic Signature Holder Company Information

Organization Name	Lockwood Remediation Technologies, LLC
Address	89 Crawford
City, State, Zip	Leominster, MA 01453
Province (if applicable)	
Country	USA
Phone Number	774-450-7177
E-mail Address	plockwood@lrt-llc.net
Registrant's Name	Paul Lockwood
Registrant Title	President
CDX User Name (optional)	

I, Paul Lockwood,
(Responsible Official or Duly Authorized Representative)

(1) Agree to protect the electronic signature credential, consisting of my user identification and password, from use by anyone except me. Specifically, I agree to maintain the secrecy of the password; I will not divulge or delegate my user name and password to any other individual; I will not store my password in an unprotected location; and I will not allow my password to be written into computer scripts to achieve automated login.

(2) Agree to contact the U.S. EPA as soon as possible, but no later than 24 hours, after suspecting or determining that my user name and password have become lost, stolen or otherwise compromised.

(3) Agree to notify EPA within ten working days if my duties change and I no longer need to interact with the EPA on behalf of my organization. I agree to make this notification by notifying the EPA permitting staff at 1-617-918-1989 or npdes.generalpermits@epa.gov.

(4) Understand that I will be informed through my registered electronic mail (e-mail) address whenever my information has been modified.

(5) Understand that EPA reports the last date my user identification and password were used immediately after successfully submitting this form.

(6) Understand and agree that I will be held as legally bound, obligated, and responsible for the use of my electronic signature as I would be using my hand-written signature.

(7) Understand that whenever I electronically sign and submit an electronic document to the EPA, I will receive an e-mail at my registered e-mail address; This e-mail will inform me that a submission has been made to EPA and will contain instructions to view information regarding the submission, including my Copy of Record (COR).

(8) Agree that if I receive an e mail notification for any activity that I do not believe that I performed, I will notify EPA as soon as possible, but no later than 24 hours, after receipt.

(9) Agree to contact the EPA if I do not receive an e mail notification within 5 business days for any electronically signed submission using my credentials.

(10) Agree to report, within 24 hours of discovery, any evidence of discrepancy between any electronic document I have signed and submitted and what the EPA has received from me by contacting the EPA.

(11) Agree to notify the EPA if I cease to represent the regulated entity specified above as signatory of that organization's electronic submissions by contacting the EPA as soon as this change in relationship occurs and to sign a surrender certification at that time.

(12) Agree to retain a copy of this signed agreement as long as I continue to represent the regulated entity specified above as signatory of the company's electronic submissions.

(13) Certify that I am the Responsible Official or their Duly Authorized representative as defined in 40 C.F.R. § 122.22 for the facilities listed in this agreement; and I certify that I have the authority to enter into this Agreement on behalf of the facilities listed above; and

(14) Certify that by signing and submitting this agreement, I have read, understand, and accept the terms and conditions of this electronic signature agreement. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this agreement and I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(15) Agree to provide and maintain an email address by which to receive communications from the EPA system. I understand that this account must be accessible only by me and that I have an affirmative obligation to check this email account regularly. If any email sent to me by EPA is returned as undeliverable, I will explain why this occurred when requested by the Agency.

Signed:

Paul Lockwood

(Responsible Official or Duly Authorized Representative)

Date:

01/11/2023

Notice of Intent (NOI) Instructions and Suggested Format for Certification

I. Paper Certification Instructions

This format must be electronically signed and submitted to NPDES.generalpermits@epa.gov by the operator if EPA Region 1 granted a waiver for submission of a e-NOI.

A. Certification Requirement

The NOI must be signed in accordance with the signatory requirements of 40 CFR Section 122.22 and include the following certification statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

II. Suggested Format for the DRGP Paper NOI Certification

A. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:

Date:

Print Name and Title:

DRAFT